

Potash Deliveries for 1957 Show Slight Increase Over Tonnages of Previous Year

WASHINGTON—Deliveries of potash for agricultural purposes in the United States, Canada, Cuba, Puerto Rico, and Hawaii by the eight principal American producers and also the importers, totaled 3,461,578 tons of salts containing an equivalent of 2,026,239 tons K₂O during 1957, according to the American Potash Institute. This was an increase of less than 1% in salts and K₂O over the same period in 1956, API said.

Continental United States took 1,867,732 tons K₂O; Canada, 92,147 tons; Cuba, 18,059 tons; Puerto Rico, 21,899 tons; and Hawaii, 26,402 tons. These figures include imports from Europe of 219,903 tons K₂O.

Exports to other countries were 205,168 tons K₂O, an increase of 28%, the report said. Deliveries of potash for non-agricultural purposes amounted to 129,517 tons K₂O, an increase of 1% over 1956.

Total deliveries for all purposes were 4,019,313 tons of salts containing an equivalent of 2,360,924 tons K₂O, an increase of 2% in salts and K₂O.

In the United States, agricultural

potash was delivered in 46 states and the District of Columbia. Illinois with nearly 200,000 tons K₂O was the leading state followed in order by Ohio, Indiana, Georgia, Florida, and Virginia, each taking more than 100,000 tons K₂O during

(Continued on page 21)

Planting Plans for 1958 Show no Broad Shifts in Acreage

By JOHN CIPPERLY

Croplife Washington Correspondent

WASHINGTON—Farmer planting intentions for the 1958 crops do not disclose any broad shifts for corn or spring wheat nor does the report reveal any impact of the soil bank acreage reserve program on corn.

The U.S. Department of Agriculture soil bank office has estimated that the acreage reserve program for corn in 1958 will remove slightly more than 7 million acres out of production of corn in the commercial corn belt.

However, the intentions report falls to show that shift in the magnitude forecast by the soil bank office. On the contrary, within the commercial corn belt there is, according to the intentions report, an expected decline of only 200,000 acres rather than the 7 million the USDA soil bank estimated.

In the USDA intentions report the government says in part, "the intended acreage (for corn) is much dependent upon farmers' appraisal of

acreage they will finally have signed in the acreage reserve after the March 28 withdrawal deadline."

Also in the same report USDA said that through March 7 corn acreage reserve agreements were filed on four million acres with an additional 3.3 million acres offered above available funds.

This observation by USDA regarding the outcome of the acreage reserve program phase of the soil bank bears out comments made to Croplife by USDA officials. On a recent field trip they learned from state and county committee officials that the corn farmers rushed to the soil bank acreage reserve program operation when they heard that the corn soil bank money was about exhausted. One county committeeman called the large sign up for the program like a "run on a bank" in many farm communities. The intentions report seems to support this observation.

Spring wheat plantings are now estimated in the intentions report at 12.6 million acres, up 1.6% from last year.

The soybean crop is the one example of a substantial boost in acres to be planted. USDA now estimates that farmers will expand bean acreage by 10% over last year to an approximate 24 million acres, the highest acreage on record for this crop. This expansion is concentrated largely in two of the big bean producing states of Minnesota and Illinois, but Iowa and Missouri are close behind the state leaders. The four states reflect an increase over last year by more than a million acres. Arkansas, a relatively newcomer to the bean belt, maintains its increasing interest as it expands its acreage for soybeans this year by more than 400,000 acres.

(Continued on page 20)

Sagebrush Control On Ranges Could Save \$40 Million

SPOKANE, WASH. — Control of sagebrush on the 24 million acres adapted to spraying among the 96 million acres of western rangeland infested with this weed could bring a saving of more than \$40 million a year, the U.S. Department of Agriculture says.

Measurable by increased forage and livestock production, this possible benefit and potential returns from control of other range infestations were discussed March 19 at the 16th annual Western Weed Control Con-

(Continued on page 20)

Fire Ant Kills More Birds Than Pesticides, Garden Group Is Told

NEW YORK—Members of the Garden Clubs of America, some of whom have expressed opposition to the widespread application of pesticides for control or eradication of insect pests, were reassured in a recent talk by a representative of the National Agricultural Chemicals Assn. that industry is not oblivious of safety factors in connection with the use of its products.

Donald L. Miller of the NAC Assn. staff, speaking at a recent forum sponsored by the Garden Clubs, told the group that pesticide manufacturers spend some \$20 million a year on research covering the safe use of materials.

Backing Mr. Miller in his presentation of the necessity of pesticides

(Continued on page 9)

Inside You'll Find

INDUSTRY PATENTS and trademarks, review of patents issued March 11 for pesticidal and fertilizer chemicals...	Page 6
TEXAS DEALER stresses filling his customers' needs as an important factor in success of retail establishment....	Page 9
WHAT'S NEW; hose end valves, inoculant label, lawn product, metal signs, nitrogen solutions booklet listed.....	Page 10
FARM SERVICE DATA covers recent results from experiment stations in Southern states on pesticides, plant foods.....	Page 12
OSCAR AND PAT accept a bit of barter for customer's unpaid bill and launch a new phase of demonstration plot..	Page 15
EDITORIALS.....	Page 22
MEETING MEMOS.....	Page 23
INDEX OF ADVERTISERS.....	Page 23

Arkansas Farm Bureau Urges More Pest Control

LITTLE ROCK, ARK.—Resolutions passed by the Arkansas Farm Bureau Federation at its recent annual meeting here included references to control of a number of agricultural pests.

The group urged appropriate county, state and government agencies to use "all possible means" to exterminate the imported fire ant; and recommended that the State Plant Board take steps also to prevent the spread of Southwestern and European corn borers.

It was also recommended that ex-

isting legislation for control of Johnson grass be extended to include highway rights-of-way in addition to the present legislation providing for the control of this weed along railroad rights-of-way in an attempt to prevent spread of the plant into areas now free from it.

State control of the pink bollworm in Arkansas was also urged by the Farm Bureau group. It was pointed out that the cotton industry in the state is presently threatened by this insect, and its eradication is of "vital interest to every citizen." They declared that this is a statewide problem and should therefore be financed through the general revenues.

A similar plea was made for USDA funds for research on ways and means to eradicate the soybean cyst nematode. It was also suggested by the Farm Bureau that USDA, in cooperation with state and local agricultural research agencies, expand its research program to determine the extent of damage actually occurring by infestations of the nematode.

Merck Appoints Two Regional Sales Managers

RAHWAY, N.J.—The chemical division of Merck & Co., Inc., has appointed two regional sales managers for agricultural products in key areas, according to J. E. McCabe, marketing director for agricultural products. Fred O. Church was named sales manager for the southern region, with headquarters in Atlanta, Ga. Appointed sales manager for the mid-Atlantic region, with headquarters in Philadelphia, was Frank W. Warren.

Mr. Church was formerly agricultural chemicals merchandising manager. In that position, he played an important role in the company's expansion into the agricultural chemicals field.

Mr. Warren was formerly assistant to the general sales manager of the chemical division. Most of his activities in that position concerned agricultural chemicals and other products.



H. Clair Dyer

DISTRICT SALES MANAGER—International Minerals & Chemical Corp. has named H. Clair Dyer district sales manager of special products in its phosphate chemical division. He will direct sales and sales development of triple super phosphate, phosphate chemicals, and fluorine in a five-state area including Michigan, Wisconsin, Illinois, Indiana, and Kentucky. Mr. Dyer joined the division in 1952, after four years with Standard Oil Co. as an area sales manager. In 1954 he transferred to International's phosphate chemical department as an area sales representative.

Douglas Chemical Holds Entomological Course

KANSAS CITY—Douglas Chemical Co. presented a short course in entomology of stored grain insects at its recent annual sales meeting here. Prof. Donald A. Wilbur, Kansas State College, Manhattan, specialist in stored grain insects, gave the sales and management personnel technical information on control of insect pests that infest grain.

Prof. Wilbur traced the metamorphosis of the various grain-infesting insects, showing their different stages and when these stages occur. He went into great detail as to the ways the insects infest the many grains and told the group of the many places around grain elevators that grain damaging insects can be found.

One item of special interest was a test proving that although grain may not appear damaged, it well may be internally infested. This method, called the specific gravity test, is performed by using a concentrated solution of sodium silicate in water. After allowing the grain to soak for a few minutes, the infested grain will rise to the top showing the approximate percentage of damaged grain.

The acid fuchsin test was also demonstrated. The acid solution colors the glutinous material secreted by the infesting insect indicating if one has entered the grain and has damaged the grain germ.

Also of importance was Prof. Wilbur's report on the effect of grain fumigants of which he has conducted an intensive study.

BIG YIELD

UMATILLA, FLA.—More than \$10,000 from three acres of sweet potatoes is the record made last season by Mitchell Rigdon and his son, who farm 462 acres near here. The crop yielded an average of 742 bu. of No. 1 potatoes per acre, which Mr. Rigdon sold locally at \$5 bu. Four sprays with DDT and wettable sulfur kept the vines free of insects and diseases. Mr. Rigdon used 3,000 lb. of citrus fertilizer (4-7-5 formula) on the three acres. The land had been limed and it showed a pH of 5.5.

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T. Leland Wilkerson, American Cyanamid Sales Executive, Dies

GREENWICH, CONN.—T. Leland Wilkerson, general sales manager of the Phosphates and Nitrogen Division, American Cyanamid Co., died suddenly at his home here March 10. He was 59 years of age and had suffered from a heart condition.

Born on a farm at Daleville, Miss., Oct. 31, 1898, Mr. Wilkerson studied agriculture at Mississippi A&M College, and following his graduation in 1922, became an entomologist for the U.S. Department of Agriculture at Tallulah, La. He then became principal and superintendent of the Newellton, La. High School and county agricultural agent for Tensas Parish, La. He came to Cyanamid as an agronomist with the former Agricultural Chemicals Division in 1926, was promoted to district sales manager in 1931; became manager of technical

services in 1937; general field supervisor in 1947, and general sales manager in 1950.

Married to the former Miss Janie Lawrence in 1939, Mr. Wilkerson is survived by his wife and a daughter, Nancy Paige.

Mr. Wilkerson was a former elder of the First Presbyterian Church, Greenwich, and at the time of his death was a member of the board of trustees of that church. He was a member of the Greenwich Country Club and a director of the National Agricultural Chemicals Assn. Memorial services were held at the First Presbyterian Church, New York, and burial took place at Toccoa, Ga.

OKLAHOMA CIRCULAR

STILLWATER, OKLA.—Circular 613, entitled "Better Ways of Applying Fertilizer," has been issued by the Oklahoma Agricultural Extension Service. Authors are Wesley Chaffin and Gaylord Haynes, Oklahoma extension agronomists.

Pesticide Registrants at New High in California

SAN FRANCISCO—The number of registrants selling pesticides and economic poisons in California rose to more than 1,000 for the first time in the 1956-57 fiscal year ended last June 30.

The Bureau of Chemistry of the California State Department of Agriculture reports a total of 1,017 registrants during the 12-month period, as compared with 993 the year before, an increase of 24, and 972 in 1954-55 and 833 in 1951-52.

The total number of products registered for sale by this group was also at a new high of 12,441, up more than 500 over the previous year's figure of 11,904. In 1951-52 the number of products was 9,773.

The largest number of pesticides were the organic chlorine compounds. The second largest group was the organic phosphorus compounds.



James O. King

James O. King in New Diamond Post

CLEVELAND—Promotion of James O. King to the post of manager of agricultural chemical sales for Diamond Alkali Co., Cleveland, has been announced here by L. J. Polite, sales manager of the Chlorinated Products Division. The appointment is effective immediately.

With responsibility for directing and coordinating Diamond's agricultural chemical sales, Mr. King will spearhead a newly expanded, long-term sales and technical service program designed to broaden the company's competitive position as a producer and marketer of 2,4-D and 2,4,5-T and their formulations, BHC, DDT, Lindane, Miticide, HCB and grain fumigants, Mr. Polite said.

Mr. King takes over his new assignment following three years as a special staff assistant in the company's sales department at its national headquarters in Cleveland where he handled a number of assignments, including the coordination of Diamond's recently completed trademark design and package modernization program.

Reserve Sign-Up

WASHINGTON—A total of 12,219,462 "allotment" acres of all wheat, corn, upland cotton, rice and tobacco has been offered for the 1958 acreage reserve on applications signed and filed by farmers through the March 7 sign-up deadline for the program, according to the U.S. Department of Agriculture. Farmers through March 7 had signed and filed applications for 3,095,067 acres of upland cotton, 4,009,195 acres of corn, 139,686 acres of rice, 93,467 acres of tobacco and 4,882,047 acres of wheat (including 3.9 million acres of winter wheat and 982,000 acres of spring wheat).

USDA also announced that over 2.7 million acres of cropland had been offered for regular contracts under the 1958 conservation reserve of the soil bank through Feb. 28, 1958. (The reports showed an increase of 331,700 acres over the nearly 2.4 million acres reported signed as of Feb. 14, 1958.)

This acreage was covered in 42,082 applications for contracts, to become effective this year, which farmers have signed with USDA through county ASC committees. For carrying out soil and water conservation practices and wildlife habitat improvement measures on the land to be taken out of production under the contracts, these farmers would earn up to 80% of the cost of establishing such practices. If they remain in compliance with the program, they will receive annual rental payments each of the years their contracts are in force.

The acreage reported signed so far under the 1958 Conservation Reserve is in addition to about 6.5 million acres put in the program during the 1956 and 1957 sign-up periods.



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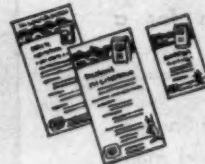
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Industry Patents and Trademarks

2,826,527

Stabilized Phosphide Pesticide Composition. Patent issued March 11, 1958 to Ludwig Huter, Frankfurt am Main, Germany, assignor to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany. A tablet adapted for use in pest control of a compressed admixture of a finely divided metal phosphide capable of being decomposed by water to form phosphine, the average particle size of said finely divided metal phosphide being less than 6.10^{-3} cm., and at least one substance which decomposes in air at moderately elevated temperature with the evolution of an inert non-combustible gas containing carbon dioxide selected from the group consisting of sodium bicarbonate, ammonium carbonate, ammonium bicarbonate, hartshorn

salt, ammonium carbamate, ammonium cyanate and urea, said substance being present in a quantity sufficient that the gas evolved under influence of the heat of hydrolysis of the phosphide upon access of water to such tablet suppresses spontaneous combustion of the hydrogen phosphide evolved from the metal phosphide upon access to such water.

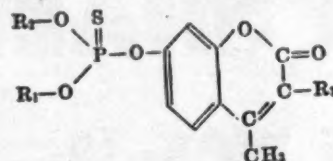
2,826,529

Miticidal Composition of Dialkyl Chlorophosphates and Method of Use. Patent issued March 11, 1958, to Hymin Shapiro, Detroit, Mich., assignor to Pittsburgh Coke and Chemical Co. A method of combating mites comprising treating the mites externally and the mite habitats with a miticidal composition comprising diethyl chlorophosphate together with

an inert surface-active miticidal adjuvant as a carrier therefor.

2,826,530

Synergistic Insecticidal Compositions Comprising an O,O-Di-Alkyl Thiophosphate - 4 - Methylumbelliferone. Patent issued March 11, 1958, to Gaines W. Eddy, Corvallis, Ore., and Edward F. Knipling, Arlington, Va., dedicated to the free use of the People in the territory of the United States. An insecticide comprising a mixture containing as a toxicant an organic phosphate having the formula



wherein R_1 and R_2 are identical alkyl radicals selected from the group consisting of methyl and ethyl, and R_3 is a member of the group consisting of

hydrogen and chlorine and, as a synergist therefor, a member selected from the group consisting of 1,2-methylenedioxy - 4 - [(2-octylsulfinyl) propyl] benzene and the alpha-isopropylpiperonyl ester of chrysanthemum monocarboxylic acid, said toxicant and synergist being present in the proportions of about from .0025% to .005% of toxicant to .025% to .05%, respectively, on the synergist.

2,826,531

Nematode-Control Compositions of alpha-alpha-prime Dichloro-p-Xylene and Methods of Using. Patent issued March 11, 1958, to Mark G. Norris, Jr., Lake Jackson, Texas, assignor to The Dow Chemical Co., Midland, Mich. In the practice of animal husbandry, the method for the control of parasitic nematodes which comprises orally administering to animals alpha-alpha-prime dichloro-p-xylene in the amount of from 20 to 250 milligrams per kilogram of body weight.

2,826,612

Preparation of Urea Crystals. Patent issued March 11, 1958, to Klaas Over and Leonardus J. Rothkrans, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands. In the preparation of urea crystals from an aqueous solution of urea containing 80-97% of urea by stirring and advancing the solution along a crystallizing vessel in which the water is evaporated and a substantially dry crystal mass of urea is discharged, the improvement comprising adding to the urea solution from 0.005 to 1% of an anion-active, surface-active agent as a frothing agent and thereby converting the solution to a thick froth.

2,826,616

Treatment of Benzene Hexachloride. Patent issued March 11, 1958, to James C. Hetrick, Berkley, Mich., assignor to Ethyl Corp., New York. A process for producing an enhanced gamma benzene hexachloride product from a crude mixture of benzene hexachloride isomers in which the gamma isomer is recovered in a high purity and yield, comprising extracting said crude benzene hexachloride with aqueous methanol in a quantity only sufficient to dissolve essentially all of the gamma benzene hexachloride, thereby leaving undissolved a substantial quantity of the crude benzene hexachloride, separating the liquid extract from the undissolved solids, concentrating said extract by removing a quantity of the methanol therefrom, and thereafter cooling said extract to crystallize a product containing an enhanced proportion of gamma benzene hexachloride from said concentrated extract, the aqueous methanol extracting solution containing between about 6 and 16 percent by weight of water and containing between $\frac{1}{2}$ part and 6 parts of methanol per part of crude benzene hexachloride, the aqueous methanol concentrated extract solution containing between about 5 and 16 percent by weight of water and containing from 1 part to 2 parts of methanol per part of benzene hexachloride, the crystallization temperature being between 0 and 40 degrees C., and the water, methanol and crude benzene hexachloride weight ratios during the extraction being such that

$$P = 23 \log R - n + 0.345(t - 30)$$

where

P is the weight percent of water in the methanol

R is the weight ratio of methanol to crude benzene hexachloride

n is between -10 and +15, and

t is the temperature in degrees C.

2,824,826

Protecting Objects from Rodent Attack. Patent issued Feb. 25, 1958, to Constantine Katsaros, Lake Geneva, Wis., and Andrew A. Baldoni, Woodstock, Ill. A method for protecting an object from rodent attack, comprising encompassing the object with a rodent repellent carrier comprising a material selected from the group consisting of 2,4,6-trinitrotoluene

(Continued on page 23)

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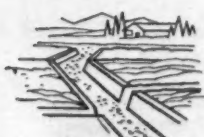
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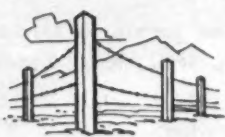
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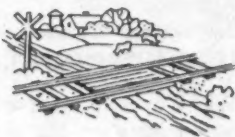
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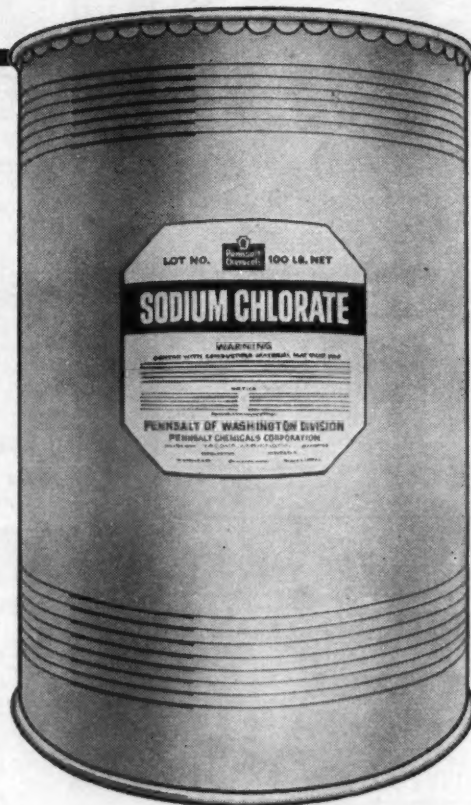


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Need for Consistent Insect Control Program Cited at Texas Tech Conference

LUBBOCK, TEXAS—A consistent, year-after-year, insect control program was called for by Dr. H. G. Johnston of the National Cotton Council's production and marketing division at the fifth annual Texas Tech Agricultural Chemicals Conference held here recently.

"Rapidly changing production practices—the short growing season on the High Plains and the ever-increasing basic need for lower cost of production and better quality of cotton—all of these factors have created a tremendous demand for effective insect control," Dr. Johnston said.

He said insect control must be aimed at reducing damage to a bare minimum, not used as a salvage operation when peak infestations threaten. Many insecticides are effective if properly used, but none will do an ef-

fective job if used haphazardly, Dr. Johnston said.

Because early maturity of cotton is important on the High Plains, early season control of thrips, fleahoppers and other pests is necessary to obtain early fruiting, he said. For this reason, a blanket control program for thrips and fleahoppers every year will be profitable, he advised.

Dr. Alan Weise of the Southwestern Great Plains Field Station at Bushland, Texas, told of successful experiments using the 2,4-D chemical for effective weed control on local crops and rangelands.

Deferred grazing must accompany an effective brush control program, he emphasized and pointed out that mesquite growing in fields next to crops can cost money.

"One mesquite uses enough water to produce \$9 worth of cotton," he stated. "It takes five-cents worth of 2,4-D to kill a mesquite."

Dr. Burnett Truchelut, Dow Chemical Co. research and development physiologist from Lake Jackson, Texas, told those attending the meeting that Dow's ET-57 or Trolene is an effective method of treating beef animals internally for insects both inside and outside the body.

The chemical is mainly helpful in controlling cattle grubs that, as larvae, travel within the animal's body discoloring commercial meat and causing holes in the hide when they emerge, he said.

Dr. Truchelut said that meat packers have to "trim out" meat discolored by the larvae trail and lose as much as \$10,000 weekly on meat trimmed from cattle formerly infested with grubs. The value of hides is also greatly lessened by holes caused by the emerging grubs. These losses are passed on to the grower, he said.

Farmers of the U.S. produce twice as much today as did their grandfathers and with a third less help—and they'll continue to do even better in the future.

That's the prediction of Dr. R. D. Lewis, director of the Texas Agriculture Experiment Station at College Station, who outlined the interdependency of agriculture and industry at the conference.

Speaking before nearly 200 farmers, ranchers and dealers attending the conference, Dr. Lewis declared "we have tended to sell agriculture short" in failing to remember that a large part of the agricultural industries are dependent on the products of 12% of the U.S. population living on the farms.

Dr. Lewis pointed out that: Since 1910, farmers of the U.S. have doubled their total output; tripled their output per man hour; and are now operating their farms and ranches with a third less manpower.

Since 1940, the output per farm worker has increased by 83%—as contrasted with an average increase of only 38% in other industries.

The ability of the American farmer to adopt and use research through education is the reason for the increased production.

NAC TESTIMONY

(Continued from page 1)

in protecting public health and in helping farmers to save their crops from destruction by pests was L. F. Curl of the U.S. Department of Agriculture.

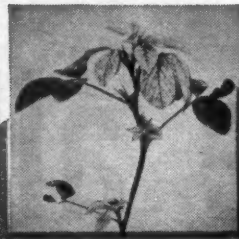
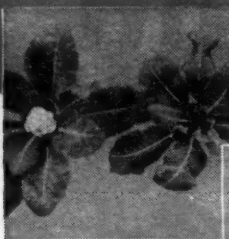
In underlining his contention that some insect pests must be eradicated, not merely controlled, Mr. Miller cited the imported fire ant as an example. Since a number of bird-lovers had voiced fears that the program would destroy both birds and other wildlife, Mr. Miller made it a point to show this is not true.

One of the leading authorities on quail, Dr. Herbert L. Stoddard, Thomasville, Ga., formerly director of the cooperative quail study association and presently a consultant for forestry and wildlife affairs for about 400,000 acres of privately-owned quail and game lands, was quoted by Mr. Miller as stating that fire ants themselves kill large numbers of quail. "We think that up to almost 50% of the (quail) nests might be destroyed by that pest," he said. In this regard, Mr. Stoddard expressed his opinion of steps that should be taken to remove this threat: "I think all those that are interested in the welfare of quail would be wise to make every attempt to keep the fire ants off of their properties by every means. In this connection, I'm very glad . . . that the federal and state people are studying this fire ant and are working out the preliminaries of control."

Also quoted by Mr. Miller was Tom Cater, Jr., regional vice president of the Georgia Ornithological Society and prominent in activities of the Middle Georgia Audubon Society, who, as an engineer at Robins Air Force Base, has observed the use of pesticides for the white fringed beetle and other insect pests. "We have sprayed these chemicals constantly for the last ten years," he said, "and I have observed that it has been done by aerial spray, by mechanical spray, and also by burying chemicals in the ground. During this period I have constantly gone birding on the weekends and I have not observed any change in the bird population through these bird trips."

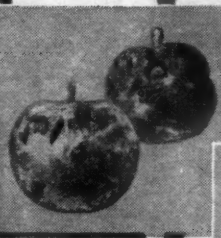
Voicing strong opposition to the entire idea of the fire ant program was Robert Cushman Murphy, honorary president of the Audubon Society and a member of the New York Museum of Natural History.

Cauliflower: left, boron treated; right, brown curd with boron deficiency



Alfalfa yellows and rosetting due to boron deficiency

Apples with external cork cracks, necrotic areas and dwarfed



EXAMPLES OF BORON DEFICIENT CROPS



Tobacco with die-back of terminal bud rolling of upper leaves

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Texas Dealer's Main Interest: Filling the Customer's Needs

By Ruel McDaniel
Croplife Special Writer

Mixing fertilizer formulas to meet the specific needs of customers, improvising equipment necessary for economical distribution when the needed equipment is not available and consistent soil testing service are major factors that have built an outstanding fertilizer business for the South Texas Fertilizer & Chemical Co., Inc., El Campo, Texas.

"Although basically we are a liquid fertilizer operation," explains R. M. Hill, manager, "we stock and mix any type of formula that a customer needs and wants." The company is eight years old and does about \$400,000 worth of business annually.

The potential sale begins when Mr. Hill or some other member of the company calls on a prospect. He talks with the farmer, to ascertain the type of farming to be done (if he does not already have this information), the number of acres to be fertilized, whether rice acreage or row crops are to be fertilized; and then he takes several samples of the farm's soils. He recommends nothing specifically until he has the soil-samples analyzed.

On this first visit, however, he tells the prospect about the various services the company provides—outright sale of fertilizers, rental or sale of applicators needed by the customer to apply his own fertilizers, or custom jobs whereby the company furnishes all necessary ingredients, mixes to fit the analysis of the soil, and application. The customer has his choice of these varied services, at a flat acreage rate determined after the analysis shows the farm's needs.

The company pays the cost of all soil tests, whether or not the prospect eventually becomes a customer. Analysis is made by a nearby college, and the cost runs from \$1 to \$15, depending on the number of samples. It is a sound investment in sales promotion, Mr. Hill declares.

The company promotes its "turn-key" fertilizing jobs. That is, after the analysis indicates the exact formula needed for a specific farm, the company proposes to mix the job to the exact formula indicated, furnish

the necessary equipment for applying the fertilizer, actually operate the equipment with its own men and handle all other details involved—at a flat acreage rate.

The charge for this complete service, which accounts for a great deal of the company's volume, particularly among farmers who do not have large acreage, varies greatly, according to the fertilizers used, the number of acres under the contract, the type of crops to be produced and even the contour of the land. All these factors enter into the price set up in the contract. Once a farmer signs the contract, he can forget his fertilizing problem: The company handles it from there.

There is another deal for farmers who do not have equipment but prefer to be their own applicators and save something on the over-all job. In such cases, the company supplies the formula, all ready to use, and then rents the necessary equipment the farmer will use to apply his own. The charge for this equipment runs all the way from 25¢ an acre to as high as \$2, depending on the equipment needed and the size of the farm to be treated.

In order to meet the needs of farmers who rent equipment as well as the company's needs for custom contracting, it has been necessary to improvise a lot of equipment and attachments to fit specific local jobs.

"Naturally we purchase stock equipment whenever it is available for the jobs we are to do," Mr. Hill explains, "but here we have a lot of problems somewhat peculiar to our area, and we find that we must change, produce and fabricate a lot of equipment and attachments to do our work at the most economical figure."

One piece of equipment which the company originated and produced in its own shop, presided over by Vernon Christensen, an expert mechanic and welder, is a combination mixer-distributor for use where the formula calls for both liquid and solid ingredients. The unit consists of two containers, welded together into a unit,

(Continued on page 13)



BUSINESS BUILDER—Custom application of fertilizer has been one of the main factors in building up the business of the South Texas Fertilizer & Chemical Co., Inc., El Campo, Texas. Here R. M. Hill, manager of the firm, stands beside one of the tractor units used in customer application work.

SHOP TALK



OVER THE COUNTER

By Emmet J. Hoffman
Croplife Marketing Editor

A little more than a year ago a new trade group called the South Florida Garden Supply Assn. was organized as one of the first of such groups in the U.S. The organization was formed as a result of mutual interest of farm supply dealers in such facets as competition, trade ethics, credit, loan or rental of equipment, markup, advertising and promotional plans and new developments.

At the recent election meeting, members agreed that on some phases there had been progress, on others much remains to be accomplished. Past meetings were addressed by speakers representing the agricultural extension service, manufacturers and the fields of entomology and horticulture.



THE NEW PRESIDENT of the South Florida Garden Supply Assn. is Richard Carson (left) of Hollywood (Fla.) Farm & Garden Supply. In charge of the organization's programs for the coming year is Douglas Knapp (right), assistant Dade County agent.

Louisiana Farmers Urged to Increase Use of Fertilizer

BATON ROUGE, LA.—The Louisiana Agricultural Extension Service is urging Louisiana farmers to increase fertilizer use up to experiment station recommendations. In a recent release to newspapers in the state, the extension service said:

"More fertilizer, up to agricultural experiment station recommendations, will pay on all crops. Experiment station results show that corn growers can get back up to \$8 for each \$1 invested in fertilizer on alluvial soils and \$3.50 for each \$1 on other soils. Rice growers get back \$6 for each \$1 invested in fertilizer and cane growers from \$3.75 to \$10, depending on soil type and fertilizer needs. Cotton growers can get back as much as \$19 for each \$1 on alluvial soils and \$5 for each \$1 on other soils.

"Where can anybody get a better return on money than that? Even the lowest of those figures represents a return of 350% in one crop year. If Wall Street could find an investment like that, nobody would buy stocks.

"According to some estimates, if all growers used the recommended amount of fertilizer on their crops, about twice as much fertilizer would be applied in the state each year as now is used. At a return of 3½ to 19 to 1, that would mean a big jump in farm income."

PINK BOLLWORM CONTROL

AUSTIN, TEXAS—Farmers in 106 Texas cotton producing counties will participate in the pink bollworm control program this year, according to John White, Texas Agricultural Commissioner. The control zones include counties in the lower part of Texas where pink bollworms pose a serious threat.

This year the association plans to extend its activities into such fields as cooperative advertising, more social activities and specific association projects aimed at focusing community attention on the association.

New officers elected were: president, Richard Carson, Hollywood (Fla.) Farm & Garden Supply; vice president, Claude Mercer, Mercer Seed Company, Miami, Fla.; and secretary, Louis Borden, Normandy Isle Seed Store, Miami Beach, Fla. Norwood Glover, Hector Supply Company, Miami, was reelected treasurer; and assistant Dade County agent, Douglas Knapp, was appointed program chairman. The original directors were elected for a two-year term, so the only new director elected this year was Robert Moore, of Hollywood Farm & Garden Supply, who fills the unexpired term of the new president.

A Close Battle

For years North Carolina has led all states in the sale of mixed fertilizers. But in the last fiscal year (July, 1956-June, 1957) Florida took over, selling 1,315,000 tons in comparison to North Carolina's 1,141,442 tons.

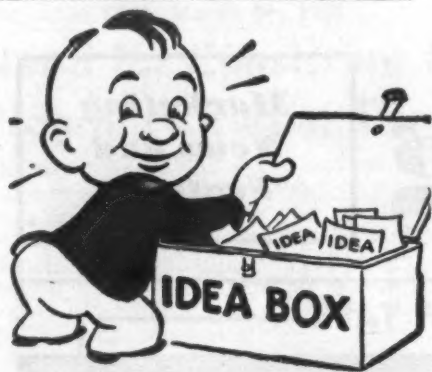
Florida taking the number one spot can be explained partly by the fact that during the last fiscal year its sales went up 10% over the previous year whereas North Carolina's went down 14%. Of the southern Atlantic states, Florida was the only one with an increase in fertilizer sales last year. North Carolina sales slipped more than the others with South Carolina following with a 5% reduction.

The moral of this story, according to W. C. White of North Carolina State College, is that North Carolina farmers need to recognize that they are going in the wrong direction with their fertilizer purchases. Fertilizer is one of the best tools farmers have today for increasing net income. With the present situation of rising production costs, greater use of fertilizer in North Carolina is one of the best ways of realizing a larger net income in agriculture.

About 85% of North Carolina's fertilizer is moved in the spring season. It is easy to make at least several dollars from one spent for fertilizer when it is applied on the basis of soil and crop needs.

PEST GROUP ELECTS

CLEMSON, S.C.—Fred P. Wright, Aiken, was elected president of the South Carolina Pest Control Assn. at the annual meeting here.



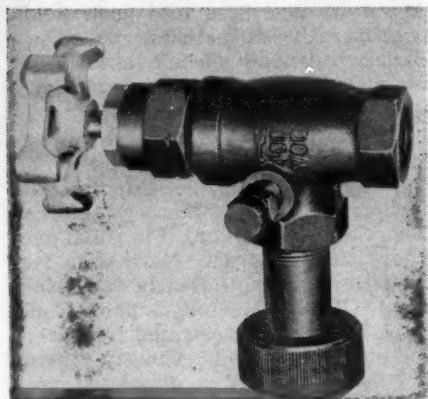
What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6703—Hose End Valves

Two types of hose end valves are now available for attachment to 3/4 in. and 1 in. vapor and liquid hose ends, announces the Bastian-Blessing Co. The valves combine a "RegO" angle valve, vent valve and hose coupling in one convenient, ready-to-use



unit and are ideal for fast, safe filling of trailer and applicator tanks, company officials claim. The hose end valves are also available with the "RegO" safety hose coupling instead of the conventional hose coupling. Check No. 6703 on the coupon and mail it to Croplife to receive details. Please print or type name and address.

No. 6705—Inoculant Label

A new foil label for "Kalo" legume inoculants produced by the Kalo Inoculant Co. is being used. The label features a leaf design in metallic colors of green, gold and white on an orange background. The foil is said to safeguard the activity of the nitrogen-fixing bacteria in the treatment by sealing in moisture and keeping a relatively constant atmosphere. Check No. 6705 on the coupon and mail it to Croplife to secure details. Please print name and address.

No. 6702—Lawn Product

A product called by the trade name, "Dyna-Green," has been introduced by the Leeds Chemical Products Co. The product involves a chemical color process that is claimed to turn a lawn green as it is watered and builds a healthier, greener lawn within days. The product is claimed to be waterproof and resistant to washing out. Check No. 6702 on the coupon and mail it to Croplife. Please print name and address.

No. 6704—Metal Signs

The California Spray-Chemical Corp. has available 3 by 5-ft. "Ortho" dealer identification signs which are

JOHN D. DOE



CALIFORNIA SPRAY-CHEMICAL CORPORATION

constructed of 28-gauge metal, embossed at the edges for rigidity and have a baked enamel finish. The sign has a dealer imprint area which allows for one or two lines to carry the dealer's name. Check No. 6704 on the coupon and mail it to Croplife to obtain details. Please print or type name and address.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6695—Booklet on Nitrogen Solutions

A technical booklet on nitrogen solutions for fertilizer manufacture has been published for the fertilizer industry by the Sohio Chemical Co. The booklet, written by Sohio's technical service department, is a reference handbook for fertilizer manufacturers. Designed for day-to-day use in plant operations, the booklet contains a 16-page section discussing manufacturing with nitrogen solutions, plus basic information on various nitrogen solutions. A section discussing fertilizer manufacture provides information in selecting solutions, along with a review of such topics as: Uniformity of ammoniation and absorption, reversion, temperature, alkalinity and acidity, hygroscopicity and solubility, and the use of urea and other specific materials. Other sections discuss granulation versus conventional mixing, considerations and calculations in formulation, and plant and personnel safety. The last section of the plastic-bound booklet includes product information sheets on various nitrogen solutions used in fertilizer manufacture, as well as aqua and anhydrous ammonia. Individual product information sheets as released by Sohio may be added to the booklet to keep product information up to date. Check No. 6695 on the coupon and mail it to Croplife to secure the booklet.

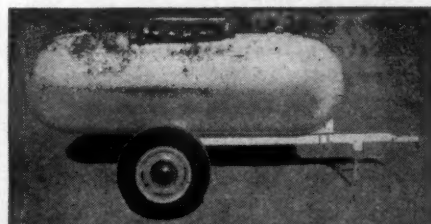
No. 6698—Applicator Attachment

A new multi-purpose fertilizer spreader or applicator attachment for use on tractor tool bars has been introduced by the E. S. Gandrud Co.

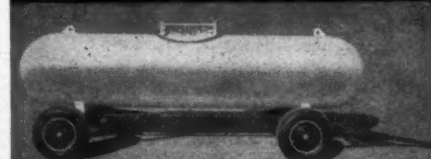


Called the "Gandy Spred-N-Till," the new attachment is said to perform a number of field operations—broadcast or drill small grains and seeds; broadcast, drill, band, sidedress or deep-place fertilizer or granular chemicals such as insecticides. For broadcast applications the unit handles materials at the rate of 2 lb. to 4,000 lb. per acre. The applicator comes in 6-ft. and 8-ft. widths. Details may be secured by checking No. 6698 on the coupon and mailing it to Croplife.

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| <input type="checkbox"/> No. 5966—Boxcar Unloader | <input type="checkbox"/> No. 6699—Tank Gauges |
| <input type="checkbox"/> No. 5970—Label | <input type="checkbox"/> No. 6700—Selector |
| <input type="checkbox"/> No. 5978—Seed Treater | <input type="checkbox"/> No. 6701—Labeling Book |
| <input type="checkbox"/> No. 5989—V-Belt Booklet | <input type="checkbox"/> No. 6702—Lawn Product |
| <input type="checkbox"/> No. 6694—Chemicals | <input type="checkbox"/> No. 6703—Valves |
| <input type="checkbox"/> No. 6695—Nitrogen Solutions | <input type="checkbox"/> No. 6704—Metal Signs |
| <input type="checkbox"/> No. 6696—Grass Mat | <input type="checkbox"/> No. 6705—Label |
| | <input type="checkbox"/> No. 6706—Wax Liner |
| | <input type="checkbox"/> No. 6707—Valves |

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No. 5970—Methoxychlor Specimen Label

A specimen label for "Marlate 50," the 50% technical methoxychlor insecticide wettable powder manufactured by E. I. du Pont de Nemours & Co. is available. Methoxychlor can be used for direct application to dairy cattle as a dust and as a spray in dairy buildings, the Food & Drug Administration ruled recently. Methoxychlor is no longer recommended for direct application to dairy animals by spray or dip. The specimen label has been brought up-to-date in accordance with recent rulings by FDA. Secure the label by checking No. 5970 on the coupon and mailing it to this publication.

No. 6696—Grass Seed Mat

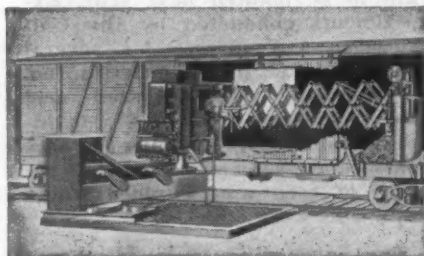
A new method to build a lawn will be introduced in 10 states this spring. The method consists of unrolling a carpet of grass seed on the soil, and watering it. Minnesota Mining & Manufacturing Co. has developed the product, which is a thin mat of green fibers containing grass seed. The mat clings to the ground, preventing the seed from being washed or blown away, preventing soil erosion, and retarding weeds, it is claimed. The mat disappears from view as the grass grows. The seed, blended for each climate, is imbedded evenly throughout the mat to assure uniform grass growth. Called "3M" brand grass mat, it will first be introduced in March and April in parts of New York, New Jersey, Connecticut, Michigan, Wisconsin, Minnesota, Iowa, Indiana, Illinois and Ohio. Secure details by checking No. 6696 on the coupon and mailing it to Croplife.

No. 6701—Labeling Book

The Manufacturing Chemists Assn. has published proceedings of its 1957 Conference on Precautionary Labeling and is selling it from its office at 1625 Eye St., N.W., Washington 6, D.C. The 52-page book includes complete papers presented at the conference and a list of the 225 government, industry and publications representatives who attended. Please write directly to the Washington address for price information.

No. 5966—Boxcar Unloader

Details of the hydraulically-operated boxcar unloader manufactured by Stephens-Adamson Manufacturing Co. have been announced. Company officials say that the unit can unload granular, pulverized or any free-flowing materials from large boxcars in less than 30 minutes. Features are: One-man operation; hydraulically-actuated boom swivel and scoop actions; positive digging and raking actions; and operator is located on an operation platform outside the

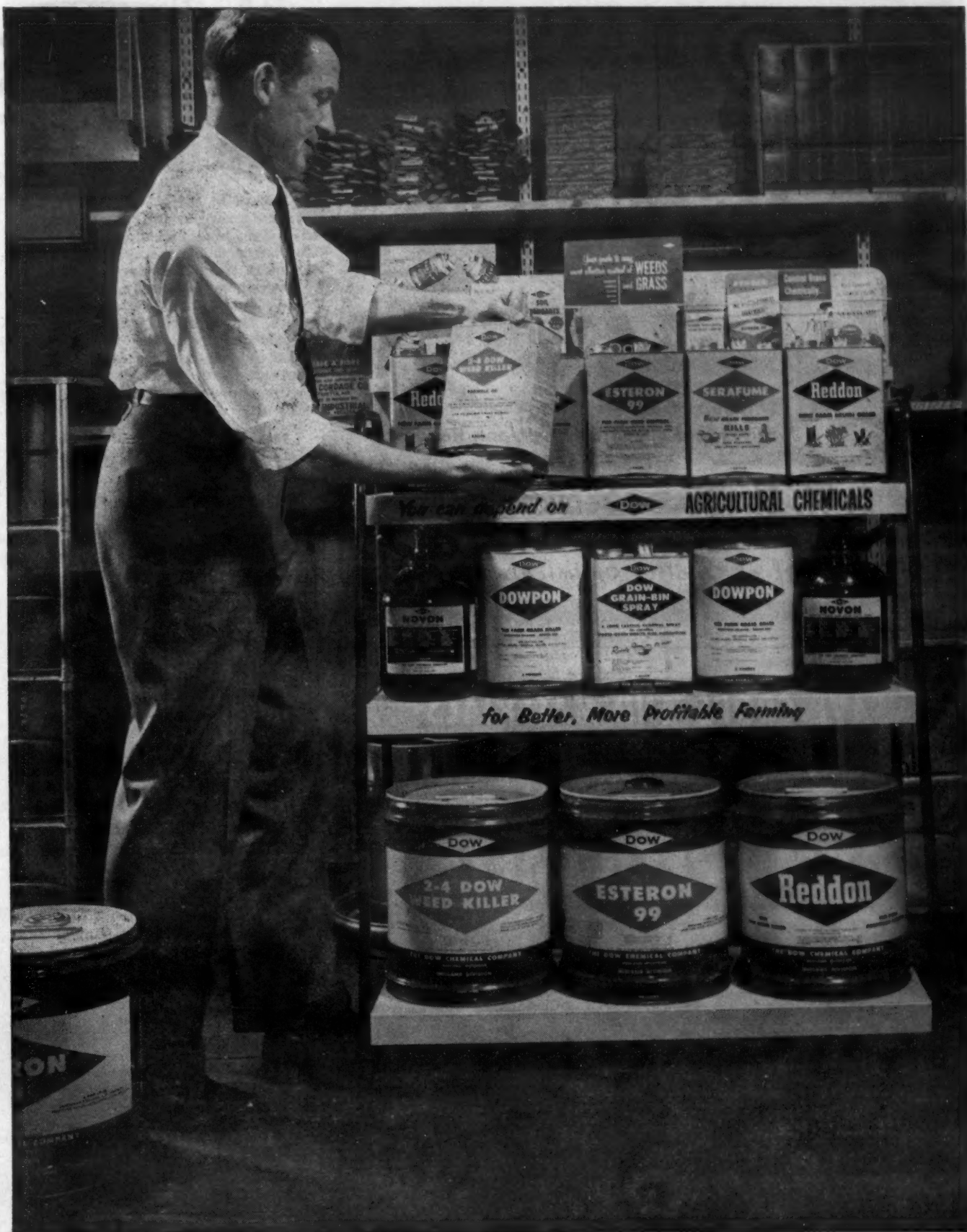


car. The boom and scoop can be set into automatic operation but the operator can stop the cycle at any time to redirect the boom. Further information may be obtained by checking No. 5966 on the coupon and mailing it to this publication.

No. 6694—Research Chemicals Booklet

"Research Chemicals from Dow," a new 40-page booklet, lists some 160 chemicals available in sample quantities from the Dow Chemical Co.,

(Continued on page 14)



Set yourself up as headquarters in the profitable farm chemicals business

The increasing thousands of farmers who are turning to farm chemicals for more profit . . . can turn into profitable customers for you.

When you become a Dow Farm Chemicals Dealer, you become headquarters for your customers' complete farm chemicals needs . . . not just an outpost for one product or another.

You'll profit by handling the famous line of Dow weed killers, headed by the nation's largest selling brand, Esteron 99*. You'll be able to supply the exclusive Dow grass killer, Dowpon*, and the most complete line of specialized soil fumigants. You'll profit with Korlan*, America's newest, neatest farm fly killer. Customers will come to you, too, for

special needs like defoliants, insecticides and animal health aids like Trolene*, (Dow ET-57) the new systemic cattle grub killer.

Dow backs you in business not only with strong advertising and effective sales aids . . . but with fifty years of experience in agricultural chemicals. This half century of pioneering assures you the best in present-day products . . . and that you will be first with the newest developments that are to come. Prepare now to profit from selling Dow Farm Chemicals. For further information, just write to: THE DOW CHEMICAL COMPANY, Agricultural Chemical Sales Dept., Midland, Michigan.

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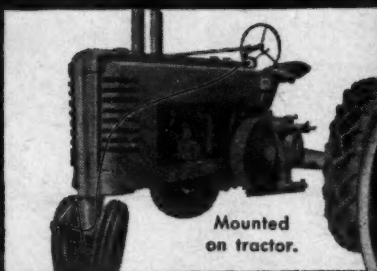
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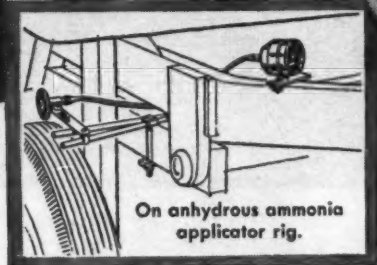
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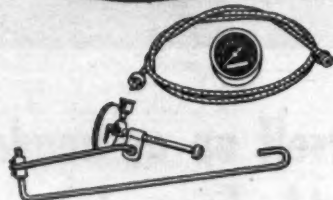
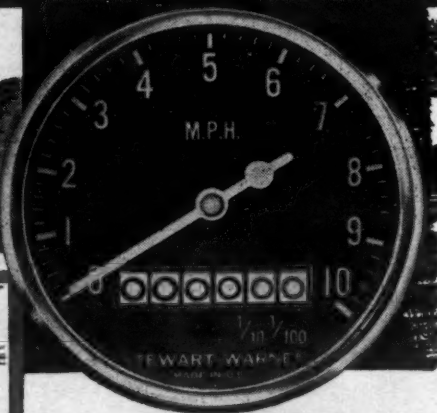
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FARM SERVICE DATA

Extension Station Reports

Control of blotchy ripening of tomatoes grown in greenhouses was effected by the use of potash in the soil, according to reports by E. M. Emmert, vegetable specialist at the University of Kentucky.

In tests over a period of several years, Mr. Emmert found that when he added nitrogen only to greenhouse soils the blotchy ripening—where spots as large as a dime remained green and failed to turn red—was evident.

But when he put potassium sulfate in with the nitrogen, the condition corrected itself.

Mr. Emmert pointed out that nutrition is one reason for the intermittent ripening.

"In the greenhouses where only ammonium nitrate was added at the rate of 300 lb. per acre," he explained, "the tomatoes were severely subject to the blotchy ripening. The condition existed even with perfectly healthy plants, which showed no signs, on close examination, of fungus, bacterial or virus disease."

In low-phosphorus areas, Mr. Emmert suggested adding the element that presumably benefits the tomato plants.

Red stele disease, first observed in Scotland in 1926 and in Illinois in 1930, is a menace to Tennessee's \$6 million strawberry industry, as some growers have learned.

Prof. E. L. Felix of the plant pathology department, University of Tennessee Agricultural Experiment Station, explains the meaning of the name of the strawberry disease: "The word 'stela' refers to the core of food-conducting bundles of the root, which most often becomes red, but may be brown or black."

"Infection occurs during the cool wet fall and winter months, but symptoms usually do not appear until about harvest—during warm weather in May when plants wilt and die. Such plants may have large rat-tail-like roots with the smaller fibrous ones rotted off. The causal fungus is closely related to those causing tomato late blight, buckeye rot, and tobacco black shank."

In applying commercial fertilizers to orchards, peach growers should keep in mind the varieties being fertilized. Roy J. Ferree, leader, Clemson horticulture extension work, says the time of application for late maturing varieties is different from that for the earlier maturing varieties, especially for applying nitrogen.

He says that on varieties ripening before July 10 in the Piedmont and July 4 in central South Carolina the last application of fertilizer for the given year's crop should be applied 4 to 6 weeks before full bloom.

He suggests that the total amount of fertilizer for the year's crop should be divided into three applications. Immediately following the harvest season, an application of 1/2 to 1 lb. of nitrate of soda—or equivalent amounts of other forms of nitrogen—should be made per tree. Another application should be made when the cover crop is seeded in the fall, and the remaining portion for the year should be applied in January and early February.

For varieties ripening after July 10 in the Piedmont and after July 4 in central South Carolina, two-thirds of the total fertilizer for the year, particularly the nitrogen,

should be applied 4 to 6 weeks before full bloom, and the remainder should be applied in a second application not later than the split-shuck stage.

A post-harvest application of nitrogen may be made to these late varieties if the trees have yielded a heavy crop and show signs of nutrient starvation. Part of the total application for the year should be applied when the cover crop is planted in the fall.

Mr. Ferree points out that if a small grain cover crop is to be turned under, an application of fertilizer, especially nitrogen, should be made to prevent a temporary nitrogen deficiency, which would cause yellowing of leaves and retard growth.

He suggests that in orchards in light sandy soils where leaching is heavy the final applications may be delayed 2 to 3 weeks.

★

Recent tests conducted by Dr. L. A. Hetrick, College of Agriculture, University of Florida, show new Sevin experimental insecticide is highly promising for control of insects attacking freshly-cut pine wood.

Dr. Hetrick's tests delayed attacks of bark beetles, ambrosia beetles, and sawyers about six weeks.

The insecticide was applied by spraying freshly-cut slash pine logs to the point of run-off. Logs were left on the ground after treatment. Nine weeks after cutting, treated logs were in sufficiently good condition for milling, while untreated "check" logs were worthless.

A formulation of Sevin 50% wettable powder was used in the Florida tests. Concentrations of active ingredient ranged from 1 1/2 to 12 pounds per 100 gallons of water spray, but chemical concentration had little effect on length of protection. For all practical purposes, 1 1/2 lb. of Sevin were as good as 12 lb.

★

The importance of agricultural limestone in crop production has been recognized by many farmers for several years. The fact that many legume plants, such as alfalfa, do not grow well on many fields unless the soil has been limed has caused farmers to lime soil prior to seeding such crop, says William D. Bishop, University of Tennessee extension agronomist.

It is also very important to consider the use of lime on acid soil where soybeans, cotton, and corn are to be planted next year. Experiments conducted by the University of Tennessee for several years show an increase of 10-15 bu. per acre of soybeans where acid soils were limed. Likewise, an increase of over 200 pounds per acre of seed cotton and over 5 bu. per acre of corn was obtained where acid soils were limed.

The value of extra production is much more than the cost of the ground limestone, Mr. Bishop points out.

In order to get the increase in yield next year, the lime should be applied as far in advance of seeding as possible. However, if this is impossible, it is still advisable to apply the lime since it will be available later in the season and for next year's production.

Soils to be used for soybeans, cotton, and corn next year should be limed immediately in order to allow sufficient time for the lime to react with the soil.

TEXAS DEALER

(Continued from page 9)

into which the ingredients are poured. The solids are liquefied in the container. A tube leads from each compartment of the unit, with the two tubes coming together just above the ground. The unit then is affixed to a tractor or cultivator, and as the vehicle moves the two tubes distribute the contents. Using this unit, the company can apply any combination of ingredients at a single operation.

Another improvisation embodies an oil tank for liquids and a series of tubes which Mr. Hill calls a "dripulator." The tank is mounted on a cultivator and the tubes are extended outward on each side, so that as many as six rows may be fertilized at a time. The number of rows to be treated is adjustable by using more or less of these flexible tubes.

The company does some airplane application, when it obtains a contract from a customer who prefers application by air, the company still accepts the contract on a flat acreage basis and sub-contracts the application to one of the local crop-dusting services.

To promote the varied fertilizer services offered, the company not only sends men out to talk with farmers but it uses direct mail advertising consistently, particularly a few weeks prior to fertilizer-buying time, to acquaint newcomers to the area with the service offered and to remind older residents and customers that it is time to begin planning the fertilizer program.

This advertising consists of an occasional letter and some postal cards.

The cards perform the job of calling prospects' attention to more specific fertilizers as needed for specific crops.

All mailings outline the various services available and invite inquiries. They also mention the company's soil analysis service and urge prospects to make use of it.

American Potash Opens New Sales Office

SHREVEPORT, L.A. — American Potash & Chemical Corporation has opened a south-central district sales office here to handle the company's interests in Louisiana and Mississippi and parts of Alabama, Texas, Oklahoma and Arkansas.

William W. Young, southern area sales representative with the company since 1949, has been named district sales manager of the branch, located at 1600 Fairfield Ave., Shreveport. Niven D. Morgan has joined the company as sales representative to operate out of the Shreveport office. Mr. Morgan has been in farm management work since he was graduated from Southwestern Louisiana Institute in 1952.

VANDALS BUSY

PRINCETON, CAL. — The Romeo Packing Co. of this city lost \$109,000 worth of liquid fertilizer recently as vandals opened the valves to several storage tanks and allowed the material to run out on the ground. The costly act took place at the company's Halfmoon Bay, Cal., cannery and fish reduction plant, and officials of the company were at a loss to explain the reason for the destructive action, other than to attribute it to mischievous youngsters who might have done it on a dare or for a lark.

ADVERTISEMENT

The Bulletin Board

No. 32 in a series from the Spencer Chemical Magazine, "Today's Fertilizer Dealer"

The Spencer Question Box

Edited by

Proctor Gull

Chief Agronomist, Spencer Chemical Co.



"The Question Box" is one of the most popular features of TFD, Spencer Chemical Company's magazine for fertilizer dealers. Questions submitted by dealers are answered by Proctor Gull, head of Spencer's 7-man field agronomy team. Here are a few timely questions and answers from recent issues of TFD.

approximately 3-1-2. Without the benefit of a soil test, we would make a general recommendation of an application containing 40 to 60 pounds of nitrogen, 40 to 100 pounds of P_2O_5 , and 40 to 100 pounds of K_2O per acre in late winter or early spring before growth starts.

We would then recommend supplemental applications of 40 to 60 pounds of nitrogen per acre two to three times during the growing season, depending on rainfall conditions. A total annual application of approximately 150 pounds of actual N, 50 to 60 pounds of phosphate and 100 pounds of potash per acre is a good guide to use in fertilizing Bermuda.

Bermuda grass will grow quite satisfactorily on soils with a pH of 5 or above. However, better growth can be obtained where the soil pH is near the neutral point (6 or 7). If soils are acid, an addition of lime periodically will improve the growth.

We must keep in mind that as we increase fertilization rates on pastures, the need for periodic applications of lime increases, even though we may be using "neutralized" fertilizers. Normal rainfall, leaching and crop removal of our basic nutrients, such as calcium and magnesium, gradually increase the soil acidity. As a result, our soils become more acid when we fertilize heavily and increase the rate of plant growth—thereby accelerating this acidifying factor.

If one of the new hybrid strains of Bermuda is being grown, fertilization rates can be increased to take advantage of the hybrid vigor obtained. It is quite common to recommend nitrogen applications of from 200 to 400 pounds of actual nitrogen per acre on Coastal Bermuda grass throughout the South. Also, where supplemental irrigation is available to increase the supply of moisture above that normally received, higher rates on common Bermuda can be justified.

1. QUESTION: Is it wise to use ammonium nitrate continuously without lime or a cover crop?—J. C. Crews, Heflin, Ala.

ANSWER: It is never wise to use any nitrogen or mixed fertilizer material continuously, regardless of source, without lime.

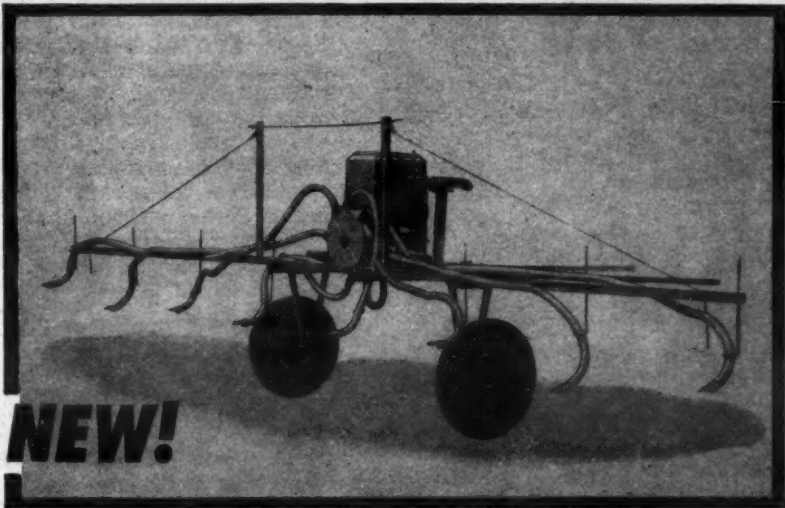
Dr. Howard Rogers of Auburn says that 90% of soil acidity is caused by: 1) Crop removal, 2) Leaching, 3) Soil erosion, and that the remaining 10% of soil acidity is caused by all fertilizers and insecticides containing sulphur.

Even a cover crop could make a soil more acid, because of growth and decaying processes.

Therefore, regardless of the nitrogen source, you must use lime. Have your soil tested at least once every three years, and add lime according to recommendations. Lime is the most practical material to correct soil acidity. It also supplies much needed calcium (and dolomitic limestone also supplies magnesium).

2. QUESTION: Please give me fertilizer rates and methods for best results on Bermuda grass.—Mark M. Thompson, Farmers Feed & Seed Company, Shreveport, La.

ANSWER: Common Bermuda grass removes nitrogen, phosphorus and potassium from the soil in a ratio of



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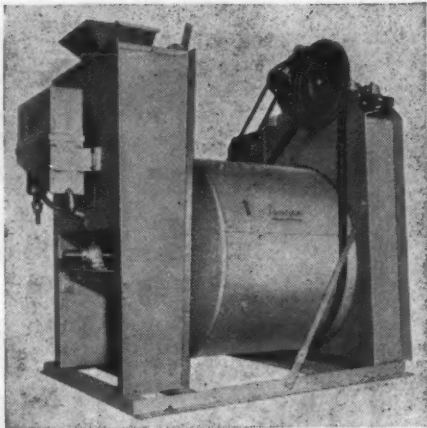
WHAT'S NEW

(Continued from page 11)

Technical Service & Development. A substantial portion of the chemicals listed are being offered for the first time. The booklet is the first comprehensive listing for general distribution of products that are of interest to research personnel and available for sampling. Chemicals described are inorganics, saturated and unsaturated aliphatics, aromatics and heterocyclics. Each listing includes the chemical's name, formula, physical description, some typical properties and sample size available. Check No. 6694 on the coupon and mail it to Croplife to secure the booklet.

No. 5978—Seed Treater

A new automatic liquid seed treater which will treat 350 bu. of seed per hour has been announced by the



Panogen Co. Designated the Model LC, the new treater is of the same basic design as the larger automatic treaters. It employs the same principle of weighing and metering the seed; the same principle of tumble-mixing in a rotating drum until seed is uniformly treated, and the same automatic clean-out to the last kernel, company officials state. Once

lines are attached to the shipping container of liquid seed disinfectant, treating can proceed all day long without stopping machine. No mixing or handling of chemical is required. The treater is shipped complete with ½ h.p. single phase motor and built-in exhaust fan for removal of chaff, seed dust, etc.

No. 5942—Silage Product Folder

A folder about "Spring Pasture," a product said to make silage "more appetizing and nutritious" and which "deodorizes grass silage" has been prepared by the Kalo Co. The product supplies an antioxidant to inhibit oxidation. Suggestions for use with grass, corn, sorghum and other silage, with poor quality roughage or in feeds are included in the folder. Secure the folder by checking No. 5942 on the coupon and mailing it to this publication. Please print or type name and address.

**No. 6700—Electric Selector**

The H. D. Hudson Manufacturing Co. has developed an electric sprayer and duster selector to determine the recommended sprayer or duster to use on a job. Hudson dealers can locate on the board the particular job to be done and insert a pointer into the proper hole. A light flashes alongside of the printed recommendation of a sprayer or duster. Check No. 6700 on the coupon to secure details. Please print or type name and address.

No. 6699—Tank Gauges

A two-page bulletin issued by the Jordan Industrial Sales Division of the OPW Corp. describes the "OPW-Jordan" direct reading tank gauges. The gauges are recommended for liquid storage tanks up to 40 ft. in height. The bulletin describes features of the gauges and material specifications. Check No. 6699 on the coupon and mail it to Croplife to secure details. Please print or type name and address.

No. 6706—Wax Lined Cans

Metal cans with a sanitary, odorless and tasteless wax lining that resists corrosion have been developed by George D. Ellis & Sons, Inc. The coating of 100% hydrocarbon, microcrystalline, petroleum or other types of waxes hot-sprayed into the finished can by an exclusive Ellisco process may be applied to any size or shape can which has an opening of ¾ in. or larger. Secure details by checking No. 6706 on the coupon and mailing it to Croplife. Please print name and address.

No. 6707—Plastic Solenoid Valves

The "SV-5100" series of all-plastic, corrosion-resistant solenoid valves has been announced by the Valcor Engineering Corp. The valves are recommended for handling non-oxidizing and oxidizing chlorides, sulphuric acid salts, phosphoric acids, sodium phosphates and hydrochloric acids. Secure detailed information by checking No. 6707 on the coupon and mailing it to Croplife. Please print name and address.

No. 5989—V-Belt Booklet

A 16-page booklet entitled, "V-Belts, the Testing, Inspection and Control of Their Quality," has been issued by the Goodyear Tire & Rubber Co. The booklet describes in words and with pictures how raw materials and finished belts are tested and inspected. One section of the book explains quality control procedures, another is concerned with experimental production. Check No. 5989 on the coupon and mail it to secure the booklet.

New Spray Service

MILL VALLEY, CAL.—A new company designed to service Marin County with a complete agricultural spray service was formed recently by F. A. Brown of Sausalito, E. H. Littoy and Cecil E. Miller of San Francisco. To be known as the Colloidal Products Corp. the firm will headquarter in Mill Valley.

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Doing Business With

Oscar & Pat



By AL P. NELSON
Croplife Special Writer

A pudgy little farmer with red nose and deep set blue eyes waddled into the office and salesroom from the warehouse.

"Schoenfeld," the farmer said slowly. "I come to see you about my account."

Oscar looked up, his eyes chilly. He recognized Bill Eberhardt, a farmer who owed the firm about \$35 for seven months.

Eberhardt took out a folded piece of paper from his jacket pocket. "How come you sent me this tough collection letter?" Pat told me a month ago I could have more time on my bill."

Oscar's lips tightened. "I own half of this company, too," he said. "Ach, I got something to say about things, too. I don't care what Pat said. I got madt last week and sent a letter to everybody that owes us money longer than four months. You was on that list. I am glad that you haf come in to pay. Shows that a letter like that is a goot thing."

"Well, I been buyin' here for four, five years," Eberhardt said sullenly. "I maybe been slow, but I allus paid up. You don't have to threaten me with a lawsuit."

"We got money comin' from you, ain't it?" Oscar asked. "We have given you credit for over seven months?"

"That's true," muttered the other. "But times is tough now. I'm sellin' some sheep next month, got some dandy lambs. I kin pay then."

"Maybe the lambs will die by then," Oscar said darkly. "Then we won't get paid either."

Eberhardt bit his lip. "I figured you would be tough, and I'm just stubborn enough to let you whistle for your money. But my wife says I gotta pay. It bothers her when we owe money. So I'm gonna pay you."

"Goot!" Oscar said importantly, a thin smile on his stern face.

"I can't pay cash," Eberhardt explained, "because I ain't got it. But I'll pay you in cow manure. I got the first big truck load outside now. I figure two truckloads will just about square up my bill."

Oscar's face went white. "Manure!" he cried. "Was ist los? We don't want manure. We got lots of fertilizer to sell. What can we do with manure?"

Oscar frowned. He didn't want the manure, but he was forced to admire Eberhardt's honesty in bringing in some payment, even if he could not use the manure. A thought came into his mind—organics.

"Chust a minute!" he told Eberhardt.

He looked in the phone book and called his best organic customer, a fellow who came in to buy a few organic items Pat has insisted stocking. It was Pat's idea that organics would also buy power mowers, tools, etc.

Oscar got the organics customer on the line. He explained he had some manure to sell. It would add humus to his soil.

"Ach," Oscar apologized irritably, "I am not trying to sell organics stuff, but a customer has got it here in a big load in the parking lot . . . What . . . you can't pay for it? Ach, what do I care if you overbought on soybean oil, brewers' yeast and blackstrap molasses? This is manure for cash. You don't want it?"

He hung up and looked at Eberhardt. "You see what a mess you made," he said. "The organics ain't got no money."

"But I hate to haul the stuff all

the way back home," protested Eberhardt. "I brought it here in good faith, and now you don't want it. Can't I dump it in a big pile at the side of your sheds? Then you can sell it when you get the chance."

"No, no," cried Oscar. "It wouldt cost us too much to load it up again."

At this moment Pat McGillicuddy came in. He saw the tense faces of Oscar and Eberhardt and sensed something was wrong. Soon—from both men—he got the story.

"So you sent out a collection letter and didn't tell me?" he said sternly to Oscar.

"You bet I did!" Oscar snapped.

"You do lots of things and don't tell me. I don't haf to tell you everything."

"Go ahead and fight," Eberhardt said disgustedly. "I guess I'll have to haul my manure back on the farm. But I'll never buy another thing at this joint, I can tell you."

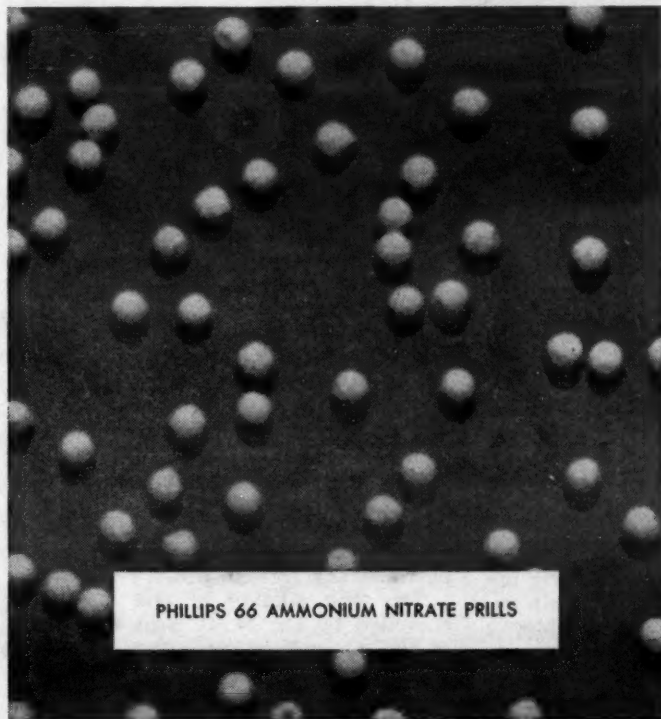
"Wait a minute, Eb," said Pat quickly. "Oscar and I both want to accommodate you, but we can't agree on how to do it. I have an idea. You dump that manure on our demonstration garden. We can plow it down soon and credit you with payment. I've got a garden home, too, where I can maybe use the second load. And I got

a neighbor that might take some. We can give the proper credits on it."

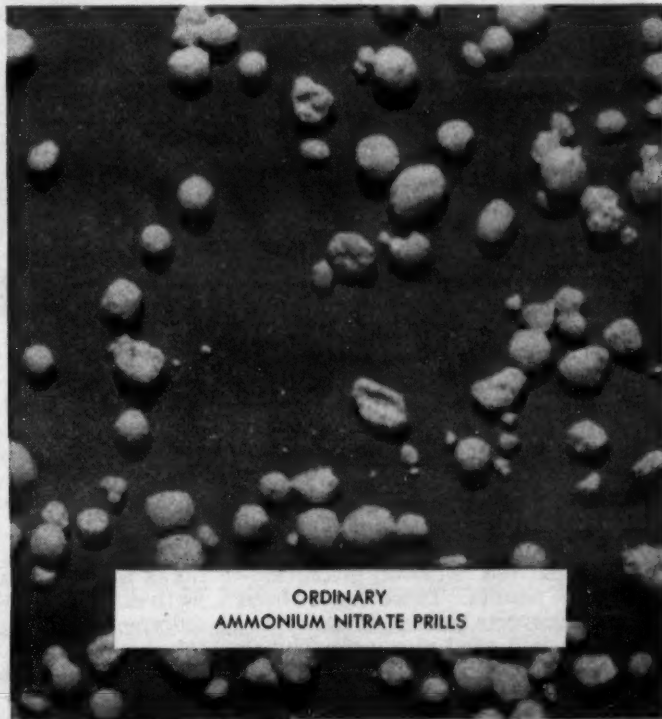
"But," protested Oscar, "our demonstration garden is to show the results of commercial fertilizer, not play up manure."

Pat smiled. "We have proved on that garden what commercial fertilizer can do, Oscar. Everyone around here knows it. Manure is good fertilizer, too. Everybody knows that. But all the manure produced in this country wouldn't go very far toward filling the soil's full requirements. That's why commercial fertilizer is needed, too. And a doggone large amount of it, too."

Eberhardt smiled. "That's the way I feel, too, Pat. I use what manure I get from my cows and fill in with commercial fertilizer. Between the two I get darn good crops. Gee, I'm glad you'll take this manure. My wife won't have to worry about that bill now; she'll sleep easy tonight."



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WICHITA, KAN.—501 KFH Building





FLORIDA SPRAYMEN—Soon after its recent organization the Horticultural Spraymen's Association of Florida set to work on improving public relations for the industry. One of its first acts was this demonstration of spray equipment, made on WPST-TV in Miami during the "City Farmer" program of Douglas Knapp, assistant Dade County agent. Members who appeared on the program, shown above, included Charles P. Johnson, Charles P. Johnson Nursery and Spray Service, association treasurer; Mr. Knapp, an honorary member; Jay Jackson, Jackson Spray Service, and Gus Daye, Superior Nursery and Spray Service. Inset is Ted Kaplan, King Spray Service, president of the association.

Miami Horticultural Sprayers Organize; Seek to Set High Business Standards

MIAMI—The fact that South Florida is usually blessed with sub-tropical weather all year around keeps lawns, shrubs and fruit trees green all year, but this same mild climate also means a year around struggle for control of pests and plant diseases. In the city of Miami alone there are at least 60 recognized firms who devote their full time to horticultural spraying.

The tremendous need for work of this type has also resulted in many fly-by-night operators who have taken gullible patrons without giving satisfactory results. There have been frequent reports indicating that people have paid good money for chinch bug elimination or lawn fertilizing, when the lawns actually got little more than a water spray treatment.

Legitimate spraymen recognized the fact that the industry was suffering from actions of unscrupulous operators. For some months, Douglas Knapp, assistant county agent, has been working with some of the leading spray firms to assist them in forming a trade association. After a series of informal meetings, 30 firms have succeeded in organizing and securing a charter under the name "Horticultural Spraymen's Association of Florida." During the organizational period, the association has received inquiries from other spraymen throughout the state, and there is a good chance that the first association will become the parent organization with chapters in other principal Florida cities.

The present officers, all from

Miami, are: Ted Kaplan, King Spray Service, president; Richard Zaun, Lake Lois Jean Nursery, vice president; William A. McAllister, Miami Lawns, secretary, and Charles P. Johnson, Charles P. Johnson Nursery and Spray Service, treasurer.

According to Mr. Kaplan, the chief objective of the association will be to raise the standards of the spray industry by discouraging unscrupulous operators and by improving public relations.

The first steps have already been taken toward accomplishing these objectives. One of the membership requirements is that the firm show a telephone listing with a permanent address. "Too many operators have been signing contracts and giving guarantees which were impossible to fulfill," said Mr. Kaplan. "When the time comes for them to make good their guarantees, they cannot be found."

As a further means of insuring customer confidence, the organization has adopted a seal which will be prominently displayed on all vehicles and equipment. A 20 column-inch ad in the local newspaper urged the public to do business with spray firms displaying the association seal. The seal is also included in individual newspaper advertising of the various members.

As soon as the charter was issued, another step in gaining public recognition was made in the form of a 15-minute program on WPST-TV. Mr. Knapp devoted one of his "City Farmer" periods on Channel 10 to a

demonstration of pest control equipment.

One of the other reasons given for forming a trade association was to obtain more aid from government agencies. As an association spokesman pointed out, it would be difficult for one operator to have a man come to Miami from Florida extension headquarters at Gainesville. However, by organizing and meeting together, the group has already succeeded in having two of Florida's leading entomologists make the trip from Gainesville specifically to put on a two-hour program for the benefit of the spraymen.

Initial membership fee for individual members is \$15, with dues at \$25 a year. Associate memberships are available at \$40 a year. Beginning in April, regular meeting dates will be on the second Thursday of each month.

The association invites inquiries regarding membership, associate membership, or other matters. Inquiries should be directed to P.O. Box 916, Riverside Station, Miami, Fla.

Louisiana Fertilizer Circular Published

BATON ROUGE, LA.—A booklet entitled "General Fertilizer Recommendations for Louisiana" has been published by the Louisiana State University Agricultural Experiment Station and is now available through county agents or by writing the Experiment Station at Baton Rouge, Dr. C. W. Upp, director of the station, has announced.

The publication, Circular No. 51, contains specific information about the most suitable fertilizers for various crops on the different types of soil in the state. The recommendations are based on the results of extensive experiments conducted at the main station at Baton Rouge, the branch Experiment Stations throughout Louisiana and by the U.S. Department of Agriculture.

The first section of the booklet, compiled by Dr. N. B. Sturgis, head of the Agronomy Department, is devoted to recommendations for field and forage crops such as cotton, sugar cane, corn, rice, soybeans and pastures.

In the second section the most suitable fertilizers for horticultural crops are discussed.

Pasture Fertilization Helps Stabilize Income

FAYETTEVILLE, A R K.—"Adequate pasture fertilization must be considered as a practice to help stabilize a livestock farmer's income."

This idea was brought out by L. H. Hileman, junior agronomist with the University of Arkansas agricultural experiment station. Summarizing a three-year study of permanent pasture fertilization, he said: "Total forage production on unfertilized plots varied widely between seasons, while yields of adequately fertilized pastures remained more constant in spite of variable seasonal conditions."

Fertilizer experiments were conducted on 13 permanent pastures in 11 counties: Clark, Izard, Lafayette, Logan, Marion, Polk, Pope, Nevada, Union, Hempstead, and Hot Spring.

The outstanding fertilizer treatment returned \$72 an acre above cost of fertilizer when forage yield of fertilized plots was compared with unfertilized plots. This gain was obtained in Lafayette County with a per acre application of 500 lb. ammonium nitrate, 300 lb. of 20% superphosphate, and 100 lb. of 60% muriate of

HERBICIDE PUBLICATION

LAFAYETTE, IND.—"Weeding with Chemicals" is the title of a new publication, ID-1, at Purdue University. The publication, authored by Oliver C. Lee, Purdue botany and plant pathologist, and Dr. G. F. Warren, Purdue horticulturist, gives recommendations for the use of 21 different herbicides that are now available for weed control.

227 Bu. Per Acre Wins South Carolina Corn Contest

CLEMSON, S.C.—First-place winner in the 1957 South Carolina Corn Contest is J. H. Bolding, Pickens County. His official average yield of 227.6 bu. per acre on a 3-acre demonstration establishes a new high record for the contest. Second-place winner is W. A. Barnette, Greenwood County, whose average yield was 193.6 bushels of corn per acre on three acres.

Mr. Bolding will receive a cash prize of \$600 and Mr. Barnette a prize of \$250. Both planted Coker 911 hybrid corn.

Winners of first and second places in the three extension district contests, their home counties, and average yields per acre on their 3-acre demonstrations are: Piedmont, Billy Smith, Oconee, 159.5 bu., and Barney B. Lewis, Pickens, 155.1 bu.; Pee Dee, Larry Allen, Williamsburg, 180 bu., and R. J. Patterson, Marlboro, 172.5 bu.; and Savannah Valley, W. A. McDaniel, Greenwood, 187.7 bu., and F. E. Grier, Greenwood, 151.5 bu.

The first-place winners in each district will receive cash prizes of \$200 each, and the second-place winners will receive \$100 each. All of the district winners except Mr. Patterson planted Coker 911 hybrid corn. Mr. Patterson planted Funk 710A.

Sterling silver cups will be awarded the contestants who produced the first and second highest average yields per acre on corn which was not irrigated. The winners of these goblets are: L. E. Dampier, Jr., Lee County, whose average yield was 167.6 bu. per acre, and Billy Smith, Oconee County, whose yield was 159.5 bu.

Gold keys will be awarded 65 contestants who produced an average of 100 bu. or more corn per acre in 1957 for the first time. They will also be enrolled as members of the South Carolina 100-Bushel Corn Club. Certificates will be awarded 50 other contestants who have previously earned membership in the club and have already received keys and who in 1957 again produced 100 bushels or more corn per acre.

The 1957 contest was sponsored by 32 commercial plant food manufacturers or dealers who are members of the South Carolina Plant Food Educational Society. It was conducted by the Clemson Extension Service.

The annual State Corn Contest was started in 1949 by a committee representing the fertilizer industry of the state in cooperation with the Clemson Extension Agronomy Division. The committee was instrumental in organizing the Plant Food Educational Society in 1949, and since that time the society has cooperated with the Clemson Extension Service in conducting the State Corn Contest as one of its major educational projects. The contest was the outgrowth of the South Carolina 100-Bushel Corn Club which was started in 1948. The contest will be continued again this year.

Hugh A. Woodle, leader, Clemson Agronomy Extension Work, says the 100-Bushel Corn Club and the State Corn Contest have stimulated farmers to change to better corn production practices. As a result of these changes, the average yield of corn per acre in the state has been increased more than 50 percent over the 20-year average prior to 1949.

Mr. Woodle attributes the increase to the widespread adoption of the South Carolina 5-Point Corn Program. The 5 points in this program are: Thorough soil preparation, use of recommended certified hybrids, liberal fertilization, growing 12,000 to 15,000 plants per acre, and early shallow cultivation.



PANEL OF EXPERTS—So numerous and varied were questions at a series of 12 classes in horticulture held in Dade County, Florida, that a panel of experts was created to answer them. The panel which assisted class director, Douglas Knapp, assistant Dade County agent, is composed of (left to right): Richard Cline, Dick's Pet & Garden Supply, Hialeah, Fla.; Lewis Watson, assistant Broward County agent; Charles Johnson, Charles Johnson Nursery & Spray Service, Miami; Norwood Glover, Hector Supply Co., Miami; and Charles Wilson, South Florida representative for California Spray-Chemical Corp. More than 600 persons attended the first class. Sales and interest in garden supplies and gardening have been increased as a result of the classes.

THIS ADVERTISEMENT sells Hi-D Ammonium Nitrate Fertilizer.

It appears in February issues of The Progressive Farmer, Prairie Farmer, Farm & Ranch, Florida Grower & Rancher, Wallaces' Farmer, Nebraska Farmer, Rice Journal, and The Citrus Magazine.

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When you choose an economical source of supplemental nitrogen, be sure to look into the important combination of advantages supplied only by Hi-D. Made by an exclusive process, new Hi-D represents the latest development in nitrogen fertilizer. You get these 8 big benefits from Hi-D — and only from Hi-D.



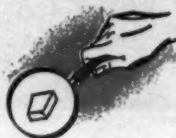
1. Super Dryness.

Hi-D is made by a patented process developed by Commercial Solvents Corporation. This entirely new manufacturing method removes all the moisture from Hi-D before the granules are formed.



2. High Density.

Because of this new process, each Hi-D granule is of extremely high density. These hard, non-porous granules lock out moisture, even under humid field conditions. Hi-D is made dry — and stays dry.



3. Special-Shape Granules.

Note the magnified granule. The unique shape and size are controlled so that distribution is even and accurate in all spreading operations. And Hi-D granules stay put on the ground.



4. Free Flow.

Hi-D flows freely even on hot, sticky days. Because of its super dryness, high density, and special shape, Hi-D doesn't gum-up, doesn't stick, clog, cake or bridge.



5. Two Key Kinds of Nitrogen.

You get nitrate nitrogen and ammonia nitrogen. One bag of Hi-D supplies as much nitrogen as 1½ bags of ammonium sulphate or 2 bags of sodium nitrate, yet costs less per unit of nitrogen.



6. Two-Speed Fertilizer Action.

Hi-D supplies a total of 33.5% nitrogen in two equal "servings." 16.75% is nitrate nitrogen to get crops off to a fast vigorous start. And 16.75% is ammonia nitrogen to provide crops with a supplemental boost during the growing season.



7. Up to 25% More Nitrogen in the Hopper.

Because Hi-D has less bulk than any other type of ammonium nitrate, you can get up to 25% more nitrogen in a normal hopper load—cover more ground per load. Hi-D saves storage space, too.



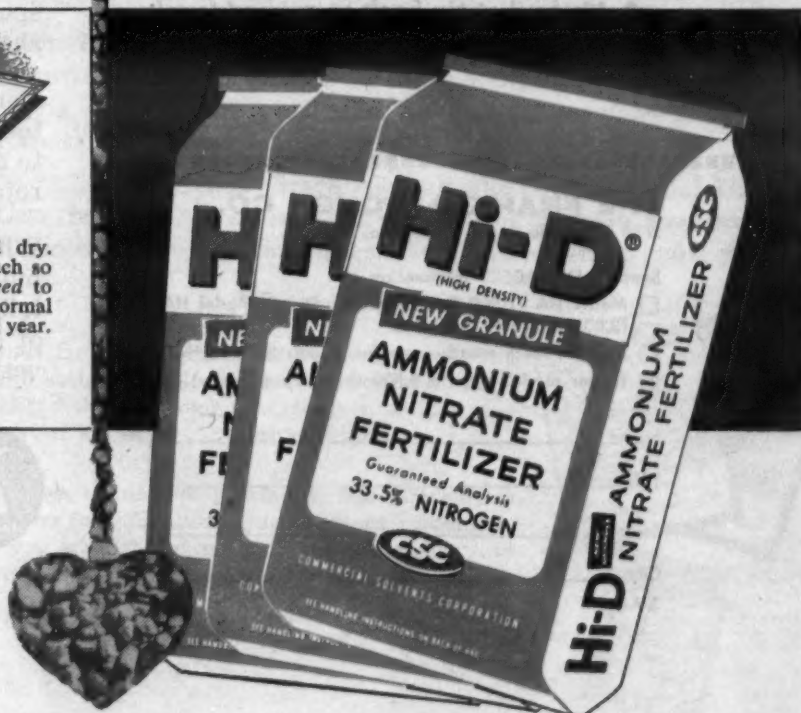
8. Guaranteed to Store a Full Year.

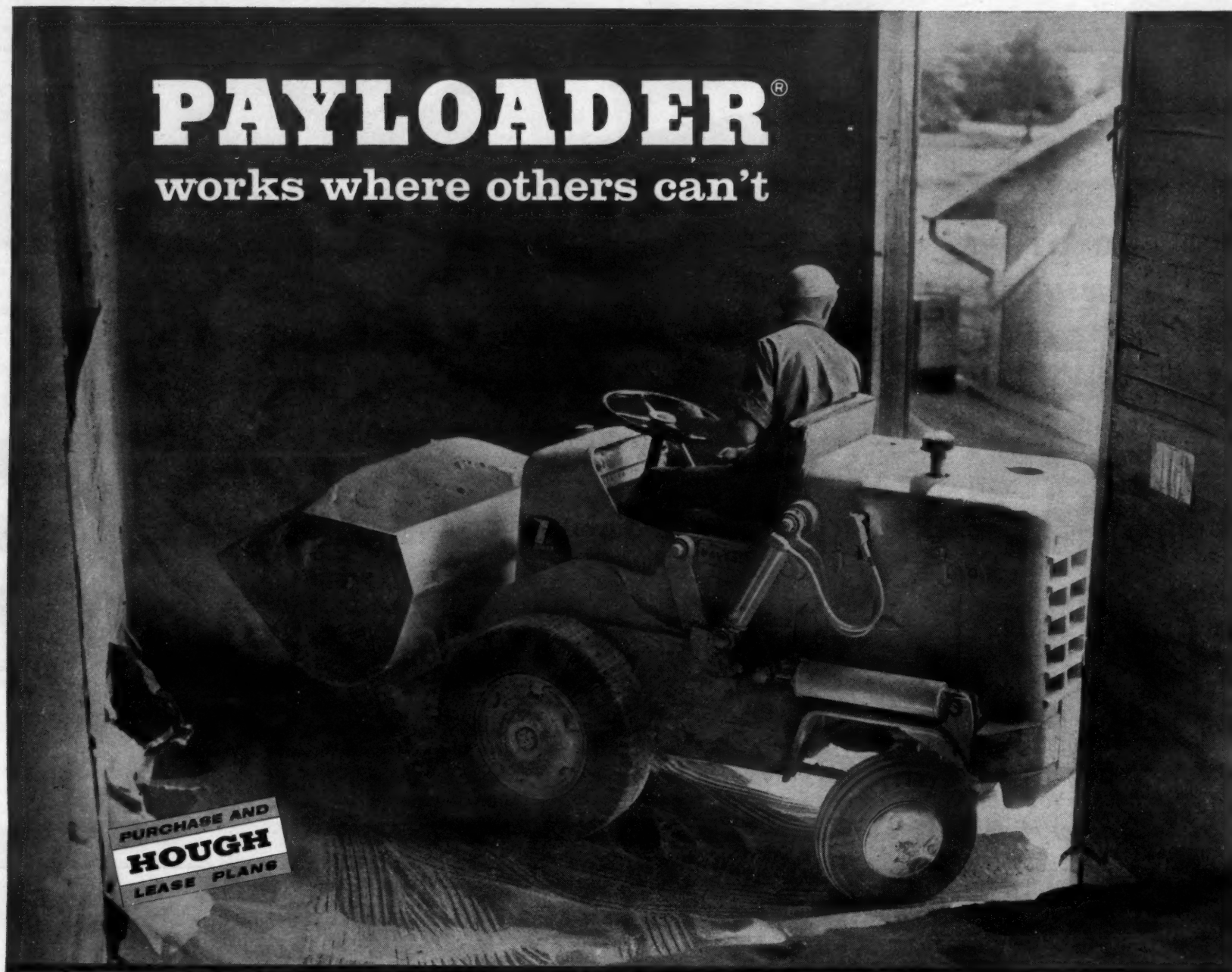
Made dry. Delivered dry. And stays dry. So much so that Hi-D is guaranteed to store well, under normal conditions, for one full year.

Try Hi-D this year. Get all the advantages of the most up-to-date ammonium nitrate you can buy. See if you don't find it better than anything else you ever used. Remember, of course, that sound management calls first for soil testing, a liming program if needed, the mixed fertilizer your dealer recommends—and then the high-yield, pay-off boost of Hi-D. Call your dealer and order yours today!

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- Shortest turning radius
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Theodore Neeley

Appointed New PCA Sales Representative

WASHINGTON—Potash Company of America has recently announced the appointment of Theodore Neeley as sales representative for Missouri, Nebraska, Kansas, Oklahoma, Colorado and portions of the Kentucky, Indiana and Illinois territory. He will work under the supervision of F. H. Kennedy, Midwestern sales manager, out of the PCA office in the First National Bank Building, Peoria, Ill.

Prior to his transfer to the Midwest, Mr. Neeley was a Potash Company of America sales representative in the North and South Carolina territory for the past five years. He was born in Denmark, S.C., attended grammar and high school there and graduated from the University of South Carolina in 1950 with a degree in business administration. After graduation he entered the U.S. Navy and at the time of his separation in 1953 had the rank of lieutenant, j.g. He came to Potash Company of America immediately after his naval ser-

Pest Control School Gets Amazing Response

BAKERSFIELD, CAL.—Amazing response is greeting an evening extension course in pest control being sponsored at Bakersfield College here by the Kern County Chemicals Assn.

Starting Feb. 6 weekly classes have been held covering such subjects as condensed classification, development and anatomy of insects, pesticides, plant diseases, weed control and characteristics of agricultural chemicals.

Attendance at early classes was more than 200, and officials of the course expect this interest to hold to the end of the course in early April.

In addition to specialists from the University of California and from state and county agricultural departments, members of the agricultural chemical industry are contributing to lectures and discussions. School officials have commented that the interest aroused by these classes indicates a growing need for this type of educational service.

New Secretary

FRESNO, CAL.—William D. Austin has resigned as executive secretary of the Agricultural Aircraft Assn., which has its headquarters at Chandler Field here. He is being succeeded by Wanda Branstetter.

NH, REQUEST DENIED

COLBY, KANSAS—A request to store anhydrous ammonia within the city limits here has been denied the Hi-Plains Cooperative Assn. by the city council. The product was said not to be a health hazard but a potential "nuisance" when stored within the city limits.

Texas Farmers Told to Add Nitrogen for Good Production and Profits

ANSON, TEXAS—Chemical fertilizer and organic matter must both be in the soil to reach maximum production, according to John Box, assistant agronomist of the Texas agricultural extension service, who addressed a group of farmers and technical workers here recently.

In discussing cotton production, Mr. Box pointed out that 20 to 25 lb. nitrogen must be added for every ton of organic matter. Where soils are low in humus, it may be increased by the addition of cotton burrs, which should be used at the rate of two tons per acre for each year. Unless nitrogen is used, however, the yield will not be increased.

Fred C. Elliott, cotton work specialist, told the group that spot spraying of Johnson grass was more

efficient than hand hoeing. He recommended the use of a jetgun and a mixture of 10 lb. dalapon and five gallons of Fab with 100 gal. water.

Mr. Elliott also compared the advantages of mechanical harvesting over hand picking. He said a farmer with 100 acres of cotton producing 120 bales a season could save \$8,800 in a five year period by using a one-row picker.

POTATO OUTPUT

PORTLAND, ORE.—Oregon's 1957 certified seed potato output was 2% below that of the previous year, but 20% above the 10-year average, reports the Oregon U.S. Department of Agriculture Crop Reporting Service. Last year's certified spud crop was estimated at 756,105 cwt. harvested from some 3,234 acres. The Russett Burbank, also called the Netted Gem, comprises 66% of all Oregon varieties.

Arkansas to Maintain Pink Bollworm Inspection Stations Through May 15

LITTLE ROCK, ARK.—An emergency allotment of \$11,000 is being authorized by Orville Faubus, governor of Arkansas, to enable the State Plant Board to continue full-time operation of its pink bollworm quarantine stations until May 15. Without this additional aid, the stations would have had to shut down entirely by March 15, or would have had to go on a part-time basis because of insufficient funds.

The state, in cooperation with the U.S. Department of Agriculture, has been operating six stations on roads leading out of Texas and Oklahoma in an attempt to prevent entry into Arkansas, of unsterilized cottonseed and other raw cotton products from areas known to be infested with pink bollworm.

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Today's outstanding Profit Opportunity for you!

**When you sell Grace Agricultural Grade Crystal Urea
A Fast-Growing, Profitable Market Opens For You**

The use of Urea for foliar application on both vegetables and citrus is a fast-growing trend today. That's because this type of application gives the farmer a combination of top quality and maximum yields.

Grace Agricultural Grade Crystal Urea has several advantages. Its low biuret content

(less than 0.2%) makes it safe; it is especially formulated for foliar application, and contains 46% nitrogen; it won't clog or damage spray equipment; and it is completely water soluble.

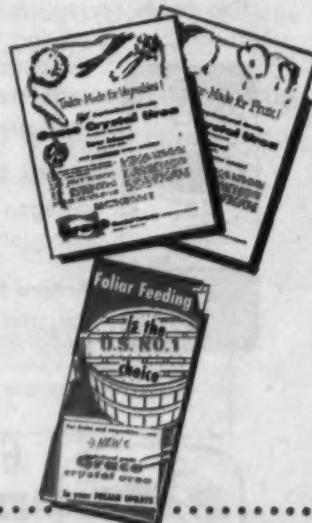
Sell Grace Agricultural Grade Crystal Urea ... and take advantage of these new profit opportunities. Here's how Grace helps you:

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PLANTING PLANS

(Continued from page 1)

It appears that the bean production acreage increase is in some measure made at the sacrifice of oat and grain sorghum acreage intentions as farmers plan acreage reductions of those two crops by 8 and 23% respectively from last year. Barley production would also reflect an acreage cut of 3%.

Total potato acreage is up less than 1% from last year and is estimated at 1.4 million; late summer and fall crops combined will show an acreage of 1,078,000, up 1.3% from the previous year. The late potato deal this year has showed all signs of a profitable season, particularly for Idaho and Maine acreage, which if previous experience has any value, always exerts an influence on the acreage of the crop for the ensuing year.

Rice acreage is also indicated for a boost of 6% at 1.5 million.

Leafhoppers Expected in Intermountain Area

LOGAN, UTAH—A beet leafhopper population 2,000 times larger than last year is predicted for the Intermountain area by Utah State University entomologists.

The experts drew their conclusions after studying the hoppers' breeding grounds in Utah, Nevada, California and Arizona desert country. The area covers 50,000 square miles.

The hopper infestation is expected to be the greatest in 18 years.

MORE IRRIGATION WATER

TRUTH OR CONSEQUENCES, N.M. — With Elephant Butte Lake holding over 800,000 acres of water, farmers along the Rio Grande River will get more irrigation water than in several years. Last year the lake was so low that only a few inches were allotted, and most farmers had to supplement their crops with underground wells.

SAGEBRUSH CONTROL

(Continued from page 1)

ference at Spokane, Wash., by Dr. Dayton L. Klingman of USDA's Agricultural Research Service. The meeting, which opened March 18 for a 3-day session, has taken "Profits from Range Weed Control" as a conference theme.

Dr. Klingman asserted that control "practices must be profitable to the operator if they are to be adopted." He cited federal-state research results to indicate possible rewards to be gained by herbicidal control under five different range-weed situations. Of these, the sagebrush infestation is the most serious areawise.

The potential returns, he pointed out, are based on the spraying of all range lands adapted to this practice, and are available to ranchers who make use of herbicides.

Supporting his contention is the cooperative federal-state research on control of big sagebrush in Oregon and Wyoming. In these experiments, if the value of forage was assumed to be \$10 a ton and spraying costs were pro-rated over a 10-year period, the annual net gain would be \$1.68 an acre over the weed control cost. On 24 million acres this potential gain totals more than \$40 million.

Several other examples were offered by Dr. Klingman as projected profits accruing from range weed control. These calculations, also supported by federal-state research findings, included sand sagebrush control for annual returns of \$16.5 million, mesquite control netting \$10.5 million and control of larkspur, sagebrush and rabbit-brush totaling about \$3.3 million a year.

The potential profits Dr. Klingman cited take into account increased yield of forage, cost of treatment, annual net gain per acre and the number of acres adapted to spraying.

Dr. Klingman said, "Profits from weed control in dollars to the producer must be a high consideration in taking research results to the rancher. Nevertheless, there are many other considerations which are also deemed important by enlightened ranchers. Among these are:

"(1) The improved quality of forage, (2) the improved condition of the range, (3) the reductions in hazards from poisoning or mechanical injury of livestock, (4) the increased water yield on some watersheds from brush control and (5) the increased ease of managing livestock on ranges relatively free of weeds and brush. All of these are considered profits from weed control."

In conclusion, he told the conference that "a great deal of research must be planned and completed to develop information on all these factors."

Another U.S. Department of Agriculture expert told the conference that choking out perennial weeds by use of smother crops and herbicides has produced excellent results in the control or eradication of weed pests like Canada thistle, leafy spurge, whitetop and field bindweed infesting agricultural lands in Idaho and Montana.

Success of these practices was reported by Jesse M. Hodgson, USDA weed specialist of Bozeman, Mont.

Mr. Hodgson's report, based on cooperative experiments conducted in Idaho and Montana by USDA and state agricultural experiment station scientists, showed that complete eradication or good control of weed pests can be achieved in two to four years under some special cropping practices used in combination with herbicides. Crops involved in the experiments were potatoes, silage corn, cereals and grasses.

In recent experiments at Bozeman, heavy infestations of Canada thistle were eradicated in two years and did not return at the end of the fourth year. The treatment was the planting of potatoes plus an application of 2,4-D the first year, which reduced the thistle to 18% of its original stand. Planting silage corn and treatment with 2,4-D the following year completed the job.

At the same location, spring wheat used alone failed to provide any control—the thistle infestation increas-

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- Extremely easy to apply—no mixing, dust or odor
- Non-corrosive—use safely with any type spray—tractor, jet, boom, or aerial
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per gal.
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ing by 218% in four years. Spring wheat in combination with 2,4-D, however, cut thistle survival down to 6% by the end of the fourth year. When 2,4-D was the only treatment, 25% of the thistle crop remained at the end of four years.

In trials at Meridan, Idaho, infestations of whitetop were successfully eradicated or controlled by certain combinations of competitive crops, tillage, and spraying with 2,4-D. Spring wheat and 2,4-D in combination knocked out the whitetop in four years, although both failed as separate treatments.

Spraying whitetop in the bud stage, preparing a seedbed seven days later and then seeding the field to barley gave good immediate control and elimination of the pest in four years.

At Judith River, Mont., the experimenters obtained excellent control by the combined use of alternate cultivations, winter wheat, spring wheat or barley plantings and 2,4-D spray.

POTASH DELIVERIES

(Continued from page 1)

the year. Due to shipments across state lines, consumption does not necessarily correspond to deliveries within a state, API pointed out.

Agricultural potash accounted for nearly 95% of deliveries. Muriate of potash continued to be by far the most popular material, comprising over 93% of the total K_2O delivered for agricultural purposes, and sulphate of potash and sulphate of potash magnesia 7%.

Deliveries for non-agricultural purposes in 1957 were 194,171 tons of muriate of potash containing an equivalent of 122,002 tons K_2O , 9,998 tons of sulphate of potash containing 5,044 tons K_2O , and 10,591 tons of manure salts containing 2,471 tons K_2O . The total non-agricultural deliveries of 129,517 tons K_2O were about 5% of all potash deliveries, and 1,531 tons or 1% more than in 1956.

During the fourth quarter of 1957, the report said, deliveries for agricultural purposes were 441,307 tons K_2O in continental United States, 42,631 tons in Canada, 7,875 tons in Cuba, 7,298 tons in Puerto Rico, and 6,687 tons in Hawaii making a total of 505,798 tons K_2O , a decrease of 13% under last year. (These figures include imports from Europe during June through December.)

Exports of potash to other countries during the fourth quarter were 24,084 tons K_2O , a decrease of 28,662 tons or 55% under last year. Deliveries of potash for non-agricultural purposes were 34,609 tons K_2O , an increase of 10% over last year. Total deliveries for the fourth quarter were 983,899 tons of salts containing an equivalent of 564,491 tons K_2O , a decrease of 15% under last year.

In addition to the regularly reported deliveries on the quarterly basis, information from governmental and other sources indicates that during June through December of 1957, there were imports of European potash into the United States, Canada, Cuba, and Puerto Rico of 116,907 tons K_2O as muriate of potash and 33,024 tons K_2O as sulphate of potash. These figures are included in the deliveries for the fourth quarter.

DELAWARE PUBLICATIONS

NEWARK, DEL.—Two new agricultural extension service folders, one on vegetable insect and disease control, the other on control of fruit insects and diseases in orchards and home plantings, have been released by the University of Delaware school of agriculture. The booklets contain recommendations on chemicals and spray schedules compiled by university staff members Dr. J. W. Heuberger, chairman of the department of plant pathology, Donald MacCreary, entomologist, and Robert F. Stevens, extension horticulturist.

California Assn. Plans For Large Attendance at Fertilizer Conference

SAN LUIS OBISPO, CAL.—Some 300 persons interested in soil fertility and plant nutrition are expected to attend the sixth annual California Fertilizer Conference on April 14-15, on the campus of California State Polytechnic College at San Luis Obispo, Cal.

Sponsored by the CFA soil improvement committee, the conference will attract fertilizer company management; agronomists serving the industry; fertilizer salesmen and dealers; farmers and ranchers; technicians of the University, the U.S. Department of Agriculture, and the California department of agriculture; testing laboratory personnel; and field men of the agricultural processors of the state, among others, the association says.

Dr. Alfred M. Boyce, director of the Citrus Experiment Station, Riverside, will be the featured banquet speaker. Conference co-chairmen are J. H. Nelson and Earl R. Mog, both of Stockton.

The program will include talks by William G. Hewitt, CFA president, Berkeley; Julian A. McPhee, president, California State Polytechnic College; Dr. D. G. Aldrich, Jr., University of California, Davis; Dr. Logan Carter, California State Polytechnic College; Dr. Clarence M. Johnson, University of California, Berkeley; Dr. Roy L. Branson, University of California, Riverside; and Robert Z. Rollins, chief, California bureau of chemistry, Sacramento.

Dr. Richard B. Bahme, western representative, National Plant Food Institute, San Francisco; P. Curtis Berryman, director, San Luis Obispo County Agricultural Experiment Service; M. S. Beckley, Santa Clara County farm adviser, San Jose; Lyman Bennion and Dr. Logan Carter,

CROPLIFE, March 24, 1958—21

both of California State Polytechnic College; Russell R. Helphenstine, farm adviser, San Luis Obispo County; Dr. R. Merton Love, University of California, Davis; and George Park, Rocca-Cuvi, Inc., San Francisco.

R. L. Luckhardt, Collier Carbon and Chemical Corp., Brea, Cal.; Dr. Lester J. Berry, University of California, Davis; Dr. Clarence M. Johnson, University of California, Berkeley; Dr. William E. Martin, University of California, Berkeley; Dr. Victor V. Rendig, University of California, Davis; Dr. Albert Ulrich, University of California, Berkeley; and John B. Wasson, United States Gypsum Company, Los Angeles.

NAMED MANAGER

PORTLAND, ORE.—Nathan Belcher has been promoted from assistant manager to manager of the Northwest Nut Growers Cooperative Assn. to succeed John E. Trunk, who has held this position since the organization's founding in 1947.

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PACKAGING SPECIALIST
"WHITEY" CAMPBELL

shows
packer how
to pocket
\$85,000

\$85,000! That's the annual dollar savings one user of Multiwall bags will enjoy as a result of a recent Union packaging survey.

The survey, made by Union Packaging Specialist "Whitey" Campbell, showed that: (1) \$57,000 a year could be saved simply by switching the company's 3-ply domestic baler bags to 2-ply's. (2) reinforced sewing construction on 100-lb.

Union Multiwall Recommendations are based on this 5-Star Packaging Efficiency Plan



- DESIGN
- EQUIPMENT
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packages would save 20# basis weight per bag . . . and additional thousands of dollars in costs depending on the number of bags used.

These were the major recommendations made and put into effect through Union's 5-Star Packaging Efficiency Plan. Total savings are expected to amount to more than \$85,000 when all improvements are completed. How much could this plan save you?

Better Multiwall performance through better planning



UNION'S PACKAGE ENGINEERING DEPARTMENT will study your Multiwall bagging methods and equipment and make appropriate recommendations, regardless of the brand of Multiwalls you are now using.

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A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Southern states.

WASHINGTON WIRE . . .

Farm Hassle Regarded as Economic Comedy

The "economic comedy" currently being enacted in Washington by the farm bloc, or its shattered splinters, is described by Croplife's Washington correspondent John Cipperly as being "little short of astonishing" as congressmen painfully attempt to discredit Ezra Taft Benson, Secretary of Agriculture, and to place on his doorstep responsibility for actions which he has had to take in accordance with federal statutes created by themselves, and which Mr. Benson could not avoid even if he chose.

"Possibly some researchers in the distant future, seeking in musty libraries for information on the mores of the present generation, will be staggered when the contradictions currently apparent come to light again," Mr. Cipperly said. "And," he adds, "all this without any sign on the part of the perpetrators that they are even aware of them."

Originally, the farm bloc in Congress represented a snug, comfortable club, its sole reason for existence being to provide a high level of prosperity for the farmer at the taxpayers' expense. When the farm bloc gained its high prestige, standing and influence in Congress, farmers were suffering from a cruel depression which returned to them mere pittance in return for their labor.

The rallying point of the farm bloc was under the banner of "parity," meaning roughly equality of income for the farmers with other segments of national life.

The level of parity price support, conceived by the architects of the farm bloc, was at first relatively small in relation to the levels we know today; once the farm bloc saw its success, it gradually boosted the level of support up to 90% of parity for basic commodities. And other producers wanted in and were let in.

The 90% of parity support was reached through a sidelong approach, a way which its sponsor, it is believed, never contemplated when he obtained enactment of the high level of support as a wartime measure to encourage farmers to undertake maximum production as part of the war effort. This measure, known as the Steagall amendment to the Emergency Price Control Act of 1942, was designed to remain in effect until two years after hostilities ended. That date has come and gone, and we still have large vestiges of the war-bred price support level which Mr. Benson wants to eliminate and which the farm bloc wants to retain as a permanent part of the farm economy.

As the farm bloc improved its influence in Congress, it added acreage controls as an instrument of protection against possible over-production of farm commodities under price support programs, comfortable in the belief that by cutting back acreage, it could reduce supply in future years, thus justifying the retention of high supports.

Price supports and acreage allotments looked like the perfect formula for perpetual farmer-prosperity.

However, as farming techniques improved and the farm revolution slowly but imperceptibly got under way, surpluses had an embarrassing way of making their presence known and this sent the farm bloc members scurrying to find some way of re-establishing the perfection of their formula.

The bloc devised the flexible sliding scale of parity level of support which appeared to be all that was needed to restore the formula of price supports and acreage allotments to their virginal

purity. The system had the virtue of being automatic, thereby removing from Congress any responsibility for needed adjustments in price support levels—and after enacting this provision Congress rested.

But surpluses just grew and grew. They failed to accommodate Congress.

About the time Mr. Benson took over as secretary, with his philosophy that price supports and acreage allotments were a drag on the farm economy, he was forced by the flexible price support provision of the farm law to impose lower levels of support and to impose the most drastic acreage allotment penalties.

But the farm bloc never contemplated such conditions when it originated its formula. The affluent comfort of the farm bloc club was disturbed. Corn-farmer members of the club eyed the cotton farmer with deep distrust. Did not the cotton farmer plant his excess acreages with corn and thereby set himself up as a competitor of the corn grower? This has been repeated for crop after crop.

The wise farmers saw what was happening and raised their voices in protest. But the farm politicians were not to be denied. Did they not create a formula of prosperity for the farmer? It worked once; it should work again.

In the face of repeated attacks by Mr. Benson, the farm bloc has been forced to give ground and now it is staging a rearguard action. Mr. Benson is administering the very law it helped to write, but the farm bloc wants to alter it to suit its purposes, as witness the "freeze" bill.

Mr. Benson may have, as the farm bloc claims, lowered the income of farmers by his actions, but he has done so under the law that Congress and the dominant farm bloc provided him when he took office. He has successfully exposed the fiction of its price support-acreage allotment hypothesis.

Perhaps the farm bloc is hiding its embarrassment behind its bitter attacks on Mr. Benson because he has demonstrated the falsity of its position. The latest effort—the "freeze" bill and its attendant parts—is nothing more or less than economic comedy.

Bright Spots in View

The current recession made its impact felt by chemical companies in the last quarter of 1957, according to a report by Arnold Bernhard & Co. in its Value Line Investment Survey. However, the report indicated that some bright spots still appear in the over-all picture.

Among these, it said, is ammonia. "If the ammonia price which was raised in July, 1957, can be maintained, earnings from this sector may help offset poorer operating results in other lines of the companies concerned," the report observed.

Other sectors such as phosphate chemistry, drugs and other products which serve the consumer non-durable area should show their usual stability, it added.

The materials made and distributed by the agricultural chemical industry are far from being luxury items, but are basic and essential to the well-being of the farmer. It is to his advantage, therefore, when he invests in fertilizers and pesticides to lower unit costs of production. In these times of hesitancy on the part of buyers, the need of emphasis on selling is outstanding.



Croplife's Home Office

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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is \$5 for one year (\$8 a year outside the U.S.). Single copy price, 25¢.

LAWRENCE A. LONG

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DONALD NETH

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MEETING MEMOS

March 25-28—Minnesota Seed & Fertilizer Dealer Meetings, Sponsored by the University of Minnesota; Gullickson's Cafe, Tracy, March 25; Porter Hotel, St. Peter, March 26; Hotel Albert, Albert Lea, March 27; Legion Hall, Winona, March 28.

March 26-28—North Central Branch Entomological Society of America, Annual Conference, Sheraton-Jefferson Hotel, St. Louis.

April 13-15—Sixth Annual California Fertilizer Conference, California State Polytechnic College, San Luis Obispo, Sidney H. Bierly, 475 Huntington Drive, San Marino 9, Cal., General Manager.

April 17-19—California Hay, Grain & Feed Dealers Assn. Annual Convention, Ambassador Hotel, Los Angeles.

April 22 — Western Agricultural Chemicals Assn., Spring Meeting, Hotel Biltmore, Los Angeles; C. O. Barnard, 2466 Kenwood Ave., San Jose 28, Cal., executive secretary.

April 30 — Manufacturing Chemists' Assn. Precautionary Labeling Conference, Shamrock Hotel, Houston, Texas.

May 22-23—Soil Science Society of North Carolina, First Annual Meeting, Williams Hall, North Carolina State College, Raleigh, N.C.

June 9-11—Association of Southern Feed & Fertilizer Control Officials, Heart of Atlanta Motel, Atlanta, Ga., Bruce Poundstone, University of Kentucky, Lexington, Ky., Secretary-Treasurer.

June 12-14 — Manufacturing Chemists' Assn., 86th Annual Meeting, The Greenbrier, White Sulphur Springs, W.Va.

June 15-18—National Plant Food Institute, Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 25-27—Pacific Branch, Entomological Society of America, San Diego, Cal.

July 8-10—Pacific Northwest Plant Food Assn., Ninth Annual Regional Fertilizer Conference, Pocatello, Idaho.

July 18-19—Southwest Fertilizer Conference and Grade Hearing, Bucaneer Hotel, Galveston, Texas.

Oct. 14-15—Western Agricultural Chemicals Assn., Annual Meeting, Villa Hotel, San Mateo, Cal., C. O. Barnard, 2466 Kenwood Ave., San Jose 28, Cal., Executive Secretary.

Oct. 20—Annual Sales Clinic of Salesmen's Assn. of the American Chemical Industry, Inc., Roosevelt Hotel, New York.

Oct. 20-21—Fertilizer Section, National Safety Council, annual fall meeting, La Salle Hotel, Chicago, Ill.

Oct. 22-24—Pacific Northwest Plant

Food Assn., Annual Meeting, Gearhart, Ore., Leon S. Jackson, P.O. Box 4623, Sellwood-Moreland Station, Portland, Ore., secretary.

Oct. 28-29—Northwest Garden Supply Trade Show, Masonic Temple, Portland, Ore.

Oct. 29-31—National Agricultural Chemicals Assn., 25th annual meeting, Bon Air Hotel, Augusta, Ga.

Nov. 9-11—California Fertilizer Assn., 35th Annual Convention, Ambassador Hotel, Los Angeles, Sidney H. Bierly, 475 Huntington Drive, San Marino 9, Cal., General Manager.

Dec. 3-5—Agricultural Ammonia Institute, Annual Meeting, Morrison Hotel, Chicago, Jack F. Criswell, Claridge Hotel, Memphis, Executive Vice President.

Jan. 20-22, 1959—California Weed Conference, Santa Barbara, Cal.

PATENTS, TRADEMARKS

(Continued from page 6)

ene, 2,4,6-trinitrotoluene-beta naphthol complex, 2,4,6-trinitrotoluene-o-anisidine complex, 2,4,6-trinitrotoluene-alpha naphylamine complex and 2,4,6-trinitrotoluene - acenaphthene complex, and a carrier therefor.

2,825,675

Bis-p-Fluorobenzyl Disulfide and Acaricidal Compositions Therewith. Patent issued March 4, 1958, to Herbert Aubrey Stevenson, Nigel George Clark, and John Ernest Cranham, Nottingham, England, assignors to Boots Pure Drug Co., Ltd., Nottingham, England. An acaricidal composition comprising bis-p-fluorobenzyl disulfide as its active ingredient, and a diluent.

Industry Trade Marks

The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act, a fee of \$25 must accompany each notice of opposition.

Design, as shown below, for agricultural chemicals (pesticides) and for a number of basic alkali products,



chromium chemicals, chlorinated products, and synthetic resins. Filed March 27, 1957, by Diamond Alkali Co., Cleveland, Ohio. First use Jan. 24, 1957; 1912 as to representation of a diamond.

Oronite, in capital letters, for chemicals and chemical intermediates for general use in the industrial

arts and for use in agriculture, including fungicides, disinfectants, algicides, and emulsifiers. Filed Sept. 27, 1957 by Oronite Chemical Co., San Francisco. First use May 28, 1917, on xylol.

NW, in capital letters, for fertilizers. Filed Nov. 30, 1956, by Northwest Nitro-Chemicals, Ltd., Medicine Hat, Alberta, Canada. First use Oct. 12, 1956; in commerce Oct. 12, 1956.

Betasol, in capital letters for surfaceactive agent. Filed Dec. 18, 1957 by American Cyanamid Co., New York. First use Nov., 1934.

Delnav, in capital letters, for pesticide. Filed July 18, 1957, by Hercules Powder Co., Wilmington, Del. First use June 10, 1957.

Religro, in capital letters, for general purpose fertilizer. Filed Sept. 19, 1957 by The Reliance Fertilizer Co., Savannah, Ga. First use Sept. 22, 1954.

ELECTED FREEPORT DIRECTOR

NEW YORK—Augustus C. Long, chairman of the board of directors and chief executive officer of The Texas Co., has been elected a member of the board of directors of Freeport Sulphur Co.

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge \$2.25. Situations wanted, 10¢ a word; \$1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Commercial advertising not accepted in classified advertising department. Display advertising accepted for insertion at minimum rate of \$11 per column inch.

All Want Ads cash with order.

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New Broyhill catalogs now available. These handy reference guides simplify your inventory of farm equipment and parts ordering. Ask your jobber for Broyhill equipment catalog or parts list catalog or write direct to:

Challenger TRI-BARREL TRAILER SPRAYER

FEMA

Broyhill offers a complete line of trailer and tractor mounted sprayers, boom or boomless, also hand gun sprayers.

The Broyhill Company

Dakota City, Nebraska

INDEX OF ADVERTISERS

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Allied Chemical & Dye Corp., Nitrogen Division	14	Merck & Co.	7
American Potash & Chemical Corp.	14	Meredith Publishing Co.	7
American Potash Institute	14	Meyer, Wilson & Geo., & Co.	7
Anco Manufacturing & Supply Co.	14	Miller Chem. & Fert. Corp.	7
Armour Fertilizer Works	14	Miller Publishing Co., The	7
Ashcraft-Wilkinson Co.	14	Monsanto Chemical Co.	7
Baughman Manufacturing Co., Inc.	14	National Distillers & Chemical Corp.	7
Bemis Bro. Bag Co.	13	National Potash Co.	7
Blue, John, Co.	13	Naugatuck Chemical Div., U. S. Rubber Co.	7
Bradley & Baker	23	Niagara Chemical Division	7
Broyhill Company, The	23	Nitrogen Div., Allied Chemical & Dye Corporation	7
Chase Bag Co.	2	Northwest Nitro-Chemicals, Ltd.	7
Chemagro Corp.	2	Olin Mathieson Chemical Corp.	7
Chemical Eng. Serv. Div. of Manifowoc Shipbuilding, Inc.	20	Pacific Coast Borax Co.	8
Chemical Insecticide Corp.	20	Penick, S. B., & Co.	8
Clover Chemical Co.	20	Pennsalt of Washington Div. of Pensalt Chemicals Corp.	6
Collier Carbon & Chemical Corp.	17	Phillips Chemical Co.	15
Commercial Solvents Corp.	17	Potash Company of America	3
Consolidated Mining & Smelting Co.	10	Raymond Bag Co.	12
Dallas Tank Mfg. Co.	10	Shattuck, S. W., Chemical Co.	12
Davison Chemical Co.	10	Shell Chemical Corp.	12
Deere, John, & Co.	10	Simonsen Mfg. Co.	12
Dempster Mill & Mfg. Co.	11	Sinclair Chemicals, Inc.	12
Dow Chemical Co.	11	Smith-Douglass Co., Inc.	12
E. I. du Pont de Nemours & Co., Inc.	4	Smith-Rowland Co., Inc.	12
Duval Sulphur & Potash Co.	4	Sohio Chemical Co.	12
Eastern States Petroleum & Chem. Corp.	19	Southern Nitrogen Co.	13
Emulsol Chemical Corp.	19	Spencer Chemical Co.	13
Escambia Chemical Corporation	19	Spraying Systems Co.	13
Food Machinery & Chemical Corp.	19	Standard Oil Co.	13
Flexo Products, Inc.	19	Stapan Chemical Co.	12
Gates Rubber Co.	19	Stewart-Warner Corp.	12
Grace Chemical Co.	20	Suamico Eng. Corp.	12
Grand River Chemical Co.	20	Successful Farming	12
Harshaw Chemical Co.	24	Tennessee Corp.	12
Henderson Mfg. Co.	18	Tiura Mfg. & Sales	12
Hercules Powder Co.	18	Union Bag-Camp Paper Corp.	21
Hough, Frank G., Co.	18	U. S. Borax & Chem. Corp.	8
International Minerals & Chemical Corp.	18	U. S. Industrial Chemicals Co.	8
Johns-Manville Corp.	18	U. S. Phosphoric Products Division	8
Jones, Robin, Phosphate Co.	18	U. S. Potash Co.	8
Kelo Inoculant Co.	18	U. S. Rubber Co., Naugatuck Chem. Div.	8
Kent, Percy, Bag Co.	18	U. S. Steel Corp.	8
Kraft Bag Corp.	18	Yelsicol Chemical Corp.	8
		Western Phosphates, Inc.	8

CALENDAR FOR 1958-59

MARCH	APRIL	MAY	JUNE
S M T W T F S	S M T W T F S	S M T W T F S	S M T W T F S
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How Hercules Helps Promote Your Service Facilities

Naturally we are interested in selling toxaphene. But we also want to assist in promoting the many unselfish service facilities now being provided by leading insecticide suppliers. That's one of the reasons why this year's Hercules advertising campaign is primarily devoted to a better understanding of insecticide usage.

More than one million farmers will be reading ads such as these in "Progressive Farmer," "Farm & Ranch," and other farm publications. In addition, local radio and television programs and the numerous dealer aids available from Hercules can help make you an even better friend of the customers you serve. It is our hope that Hercules' promotional activities will be of direct value to you.

Questions and Answers About Cotton Insecticide Usage

Q Is there a trend toward earlier planting?

To some extent, but the important trend is toward early production.

Q Aren't early planting and early production the same thing?

Not necessarily. For example, early control of insects can be a big step toward early production even if planting is done at what you consider the regular time.

Q Why is that?

Anything that slows down the natural growth cycle of cotton interferes with early production. Early control of insect pests is essential to promote the vigorous, healthy growth of plants. That's why early control is an important part of any well planned insecticide program.

Q Is it true that the more insecticide I use the more efficient my control program will be?

No. When you use toxaphene, for example, you will find that the most economical and efficient program is based on an intelligent use of the insecticide in recommended dosages. Excessive usage is uneconomical and unnecessary.

Q Does early production increase my profit?

Many farmers have found that they get a better price for cotton that's produced early. Buyers appreciate that early cotton is clean, free from trash, and has better lint quality. But even more important, early production protects you from late-season insect pests.

Q Do I need help in planning my insect control program?

Few farmers would claim to be entomological experts. You should seek the best help you can get.

Q Where can I get help?

In addition to the usual sources, help is available from the best insecticide suppliers who are placing trained entomologists on their staffs to aid the farmer. Shop for this kind of service. With-out it you are getting less than you are paying for in your insecticide purchases.

Q Is it possible to sum up the steps successful planters will be taking in 1958?

The following, at least, will be part of their program: a regular insect control program with real guidance from the insecticide supplier; emphasis on proper use of insecticides; insistence on quality insecticide formulations; and a greater effort toward early production of cotton.

Presented in the interest of better insecticide usage by
Agricultural Chemicals Division

HERCULES POWDER COMPANY
INCORPORATED

900 Market Street, Wilmington 99, Delaware
Manufacturers of technical toxaphene



NX58-4